STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

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RE: DECLARATORY RULING PROCEEDING JANUARY 22, 2010
REGARDING INFORMED CONSENT

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STATE BOARD OF CHIROPRACTIC EXAMINERS

BEFORE: MATTHEW SCOTT, D.C., CHAIRMAN
PAUL POWERS, D.C., BOARD MEMBER
SEAN ROBOTHAM, D.C., BOARD MEMBER
MICHELE IMOSSI, D.C., BOARD MEMBER
JEAN REXFORD, PUBLIC MEMBER
VINCENT A. PACILEO, PUBLIC MEMBER

FOR THE BOARD:

DANIEL SHAPIRO, ASSISTANT ATTORNEY GENERAL

APPEARANCES:

FOR THE CONNECTICUT CHIROPRACTIC ASSOCIATION:

MOORE LEONHARDT & ASSOCIATES
67 Russ Street
Hartford, CT 06106
BY: MARY ALICE MOORE LEONHARDT, ATTORNEY

FOR THE CHIROPRACTIC STROKE AWARENESS ORGANIZATION:

LAW OFFICES OF NORMAN A. PATTIS, LLC
P. O. Box 280, 649 Amity Road
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BY: NORMAN A. PATTIS, ESQUIRE

FOR THE VICTIMS OF CHIROPRACTIC ABUSE, INC.:

JAY MALCYNSKY, ESQUIRE
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New Britain, CT 06051

1 . . .Continued verbatim proceedings of a
2 hearing before the State of Connecticut, State Board of
3 Chiropractic Examiners, in the matter of the Declaratory
4 Ruling Proceeding Regarding Informed Consent, held at the
5 Department of Public Health, 300 Capitol Avenue, Hartford,
6 Connecticut, on January 22, 2010 at 9:09 a.m. . . .
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9
10 CHAIRMAN MATTHEW SCOTT: Good morning. I'm
11 Dr. Scott, and, in a few minutes, we're going to begin
12 our, hopefully, our last and final day of hearings. Mr.
13 Shapiro, do you have anything?
14 MR. DANIEL SHAPIRO: No.
15 CHAIRMAN SCOTT: All right.
16 (Off the record)
17 CHAIRMAN SCOTT: Good morning. We're about
18 ready to begin. Can we start with the next witness,
19 please?
20 MS. MARY ALICE MOORE LEONHARDT: Good
21 morning, members of the Board. On behalf of the
22 International Chiropractic Association, an intervenor in
23 this proceeding, I would like to call Dr. David Cassidy to
24 the witness stand, and he will be presenting the testimony

1 pre-filed by the International Chiropractic Association.
2 Dr. Cassidy, would you please take the seat there? Thank
3 you.
4 CHAIRMAN SCOTT: Would you please swear in
5 Dr. Cassidy?
6
7 DR. DAVID CASSIDY
8 having been called as a witness, having been duly sworn,
9 testified on his oath as follows:
10
11 MS. MOORE LEONHARDT: Good morning, Dr.
12 Cassidy.
13 THE WITNESS: Good morning.
14 MS. MOORE LEONHARDT: Before I begin with
15 Dr. Cassidy, we have previously filed his curriculum
16 vitae, and I would ask that Dr. Cassidy be recognized as
17 an expert witness at this time.
18 MR. SHAPIRO: Attorney Malcynsky?
19 MR. JAY MALCYNSKY: I did indicate in my
20 letter last week that I had some issue with this, but I
21 would, at this point in time, choose not to object and get
22 on with hearing from Dr. Cassidy, since we've heard so
23 much about him thus far.
24 MR. SHAPIRO: Attorney Pattis?

1 MR. NORMAN PATTIS: I adopt Attorney
2 Malcynsky's eloquent remark.
3 MR. SHAPIRO: Okay and I'm going to mark
4 Dr. Cassidy's CV as Exhibit 69. Attorney Malcynsky, any
5 objection to that document?
6 MR. MALCYNSKY: No objection.
7 MR. SHAPIRO: Attorney Pattis?
8 MR. PATTIS: None.
9 MR. SHAPIRO: Attorney Moore Leonhardt, I'm
10 assuming there's no objection to that?
11 MS. MOORE LEONHARDT: No objection. Thank
12 you.
13 MR. SHAPIRO: Okay. That will be marked as
14 Exhibit 69.
15 (Whereupon, the above-mentioned document
16 was marked as Exhibit No. 69.)
17 MR. SHAPIRO: Attorney Leonhardt, with the
18 understanding that he's been qualified, the Board would
19 listen to short remarks from Dr. Cassidy, but then, quite
20 soon, subject him to Cross-Examination.
21 MS. MOORE LEONHARDT: Absolutely. So
22 noted. May I proceed?
23 MR. SHAPIRO: Yes.
24 MS. MOORE LEONHARDT: Thank you.

1
2 DIRECT EXAMINATION
3 BY MS. MOORE LEONHARDT:
4 Q Dr. Cassidy, you are here today on behalf of the
5 International Chiropractic Association?
6 A Yes.
7 Q And with your background and training, if you
8 could simply state for the Board and the members of the
9 audience, who haven't had an opportunity to review our
10 curriculum vitae, what your current position is and just a
11 very brief summary of your background and training?
12 A I'm currently a Senior Scientist and
13 Epidemiologist at the Toronto Western Research Institute
14 at the Toronto Western Hospital, which is part of the
15 University Health Network, which is a teaching hospital
16 network with the University of Toronto.
17 I'm also a Professor of Epidemiology at the
18 Dalla Lana School of Public Health at the University of
19 Toronto, and I'm the Director of a Center for Research
20 Expertise in Improved Disability Outcomes.
21 As far as my background, I trained as a
22 chiropractor, and I graduated from the Canadian Memorial
23 Chiropractic College in 1975. I practiced as a
24 chiropractor for one year in Toronto, then I practiced in

1 Saskatoon, Saskatchewan. While I was in Saskatchewan, I
2 completed a degree, an undergraduate degree in anatomy,
3 and then a Master's degree in surgery, and a Ph.D. degree
4 in pathology.
5 After that, I completed a second Ph.D.
6 degree in epidemiology and injury prevention at Karolinska
7 Institutet in Stockholm, Sweden.
8 Q Thank you. Now you have before you the pre-
9 filed testimony of the International Chiropractic
10 Association, do you not?
11 A Yes, I do.
12 Q And you're familiar with that statement?
13 A Yes, I am.
14 Q And do you intend to adopt that as the testimony
15 on behalf of the International Chiropractic Association
16 today?
17 A Yes.
18 Q All right and could you briefly summarize the
19 key points of the ICA's position with regard to the
20 question before the Board on the issue of informed consent
21 and whether there ought to be a mandate to include a
22 discussion of the stroke?
23 A Well if my understanding is correct, this
24 submission raises the issue that I agree with, that we do

1 not know that chiropractic care is a cause for
2 vertebrobasilar artery stroke, and that, therefore, if we
3 do not know that, informed consent is not really informed,
4 because we don't know what the risk is. We don't know if
5 there's a risk.
6 Q And that's the ICA's position?
7 A I think that's the ICA's position, yes.
8 Q Thank you. Was there anything you'd like to
9 add?
10 A Well they rely heavily on the study that I was
11 the first author of that showed no evidence of excess risk
12 of stroke following chiropractic care, and I'm here to
13 answer questions about that study.
14 MS. MOORE LEONHARDT: Thank you. Nothing
15 further.
16 MR. SHAPIRO: Attorney Malcynsky, before
17 you begin, I suggest that the pre-filed testimony, which
18 has been pre-marked as Exhibit 36, be admitted as a full
19 exhibit. Do you have any objection?
20 MR. MALCYNSKY: I have none.
21 MR. SHAPIRO: Attorney Pattis?
22 MR. PATTIS: None.
23 MR. SHAPIRO: Okay. The testimony of the
24 ICA, which is Exhibit 36, is admitted as a full exhibit,

1 without objection.
2 (Whereupon, the above-mentioned document
3 was marked as Exhibit No. 36.)
4 MR. SHAPIRO: Attorney Malcynsky, you can
5 continue.
6 MR. MALCYNSKY: Thank you.
7
8 CROSS-EXAMINATION
9 BY MR. MALCYNSKY:
10 Q Good morning, Dr. Cassidy. Dr. Cassidy, would
11 you agree that there's been a great deal of discussion and
12 study and examination in the medical community of the risk
13 associated with chiropractic manipulation and stroke?
14 A No.
15 Q So you're the only one that studied it?
16 A No.
17 Q So there has been others that have studied it?
18 A Well relative to other health conditions, I
19 think there are very few studies.
20 Q Would you agree that others have opined that
21 there's a risk, however rare, of a stroke after a cervical
22 manipulation?
23 A Yes.
24 Q I don't know if you've followed the testimony

1 here, or read the transcripts, but we have heard testimony
2 here from many of the witnesses that they believe that
3 your study, as published in the Spine article in 2008,
4 somehow settles this issue, that there's no appreciable
5 risk associated with cervical manipulation and stroke. Do
6 you agree with that?
7 A Yes.
8 Q Then I suppose it would be important for us to
9 understand a little bit about your study. The text of
10 your study states the following. "The purpose of this
11 study is to investigate the association between
12 chiropractic care and VBA stroke and compare it to the
13 association between PCP care and VBA stroke." Can you
14 explain what you meant by that?
15 MS. MOORE LEONHARDT: Counsel, could you
16 please direct the witness to the paragraph that you're
17 reading from, because he didn't have the study in front of
18 him at the time? Thank you.
19 Q I believe it's S-177. Was that not the purpose
20 of the study?
21 A It's the purpose.
22 Q Okay. Can you explain to me a little bit more
23 what you meant by the association between chiropractic
24 care and VBA stroke compared to the association between

1 PCP care? What do you mean by chiropractic care?
2 A Chiropractic care is care that chiropractors
3 provide when patients visit their offices.
4 Q Now, so, you looked at all chiropractic care,
5 not just chiropractic care that included a cervical
6 manipulation, correct?
7 A We looked at both.
8 Q So you looked at chiropractic care that included
9 treatment other than cervical manipulation?
10 A Yes.
11 Q Okay.
12 A Well, yes.
13 Q Is that not like studying all of cardiology to
14 determine the risks of open heart surgery?
15 A No.
16 Q I mean why would you not study the type of
17 chiropractic care that was more likely to cause or be
18 associated with a stroke?
19 MS. MOORE LEONHARDT: Objection to form.
20 Q Did you understand the question?
21 A Yes.
22 Q Okay. Could you please answer? Pardon me?
23 A We did do that.
24 Q Explain to me how you did that?

1 A If you look at Table Seven on S-181, you can see
2 that we produce risk estimates looking at any DC visit, or
3 any primary care visit, headache or cervical DC visit,
4 headache or cervical primary care visit, so we did
5 stratify by visits.
6 Q Would you agree or disagree that when we're
7 talking about the risk of stroke, that there's a
8 difference between cervical adjustment and other
9 chiropractic care? Are there certain types of
10 chiropractic care that might more likely result in a
11 stroke than others?
12 A I don't know.
13 Q All right. If I went to a chiropractor and the
14 chiropractor put a hot compress on my lower back, is that
15 more or less likely to be a risk for stroke than if he
16 performs a neck manipulation?
17 A Well I don't think either are risks for stroke.
18 Q So you don't think there's a risk for stroke in
19 either one?
20 A No.
21 Q Did your study not conclude that there's an
22 association between vertebrobasilar arterial stroke and
23 chiropractic visits in those under 45 years of age?
24 A Yes.

1 Q You mentioned Table Seven. Am I correct in
2 interpreting Table Seven as a conclusion, that, from a
3 statistical point of view, there's an association in those
4 less than 45 years of age where you found that the odds of
5 having a stroke among the patients with any chiropractic
6 visit is 1.3 times the odds of having a stroke among those
7 who did not visit a chiropractor, is that correct?
8 A That's correct.
9 Q Is this finding statistically significant in
10 your opinion?
11 A Statistically significant? Which estimate
12 exactly are you talking about?
13 Q Well the fact that it's 1.3 times more likely to
14 happen if you went to see a chiropractor than if you
15 didn't.
16 A So just to be specific here, you're looking at
17 the case crossover estimate any DC visit under 45 years of
18 age?
19 Q Correct.
20 A Odds ratio 1.37?
21 Q Right.
22 A Confidence interval, 1.10 to 1.70?
23 Q Right.
24 A That is statistically significant, yes.

1 Q Okay. In what way?
2 A It's statistically significant. The odds ratio
3 doesn't cross one.
4 Q So it's statistically significant to indicate
5 risk?
6 A Yes.
7 Q Okay.
8 A It's statistically significant to indicate an
9 association, yes.
10 Q Okay. Your study also said, quote, "We have not
11 ruled out neck manipulation as a potential cause of some
12 VBA strokes," correct?
13 A Correct.
14 Q And you say "potential cause," not potential
15 association?
16 A Correct.
17 Q Okay. You also say, "We found no evidence of
18 excess risk of VBA stroke associated with chiropractic
19 care," is that correct?
20 A That is correct.
21 Q It says, "excess risk," not no risk, correct?
22 A Well if there's no excess risk, in other words,
23 you subtract the background risk and the result is zero,
24 then there's no risk.

1 Q Well you don't say no risk. You say "excess
2 risk."
3 A By that, we mean there's no added risk for
4 chiropractic care.
5 Q No added risk, but there is risk?
6 A No. There's no risk. There's an association.
7 Q I just asked you if the statistical significance
8 of having 1.3 times the odds of having a stroke when you
9 see a chiropractor as if you didn't see a chiropractor was
10 indicative of risk and you said yes.
11 MS. MOORE LEONHARDT: Objection. The
12 witness corrected himself immediately.
13 MR. PATTIS: Objection. That's a speaking
14 objection. I thought the panel wanted non-speaking
15 objections.
16 MS. MOORE LEONHARDT: So I think it's
17 mischaracterizing. He's mischaracterizing the witness's
18 testimony. I believe the witness corrected himself, and
19 we could have the tape played back.
20 MR. MALCYNSKY: We can go through that
21 exercise if you'd like.
22 MS. MOORE LEONHARDT: I think --
23 MR. SHAPIRO: Hold on.
24 MS. MOORE LEONHARDT: -- it's such a sticky

1 issue it would be good to have the record clear.
2 MR. SHAPIRO: Counsel, hold on a second.
3 Attorney Malcynsky, why don't you rephrase the question
4 and see if we can move forward?
5 Q I guess, Dr. Cassidy, what I'm trying to
6 establish is that the statement that "we found no evidence
7 of excess risk" is not the same as saying we found no
8 risk?
9 A Well I think it is, and if I may explain the
10 study?
11 Q Okay.
12 A Because it's actually fairly simple, and that is
13 that we looked at the association between chiropractic
14 visit and stroke and the association between visits to
15 family doctors and stroke, and the assumption was that
16 family doctors don't cause stroke, but there's a
17 possibility that people in the prodrome of stroke are
18 visiting both chiropractors and family doctors, because
19 these types of strokes present with neck pain and
20 headache.
21 That's why we also studied family doctors,
22 and when you subtract that background risk, in other
23 words, the association, risk association, the association
24 between family doctor care and the stroke, it's no

1 different than the chiropractic care and this type of
2 stroke.
3 So the conclusion is that there's no added
4 risk, and we state this in the paper, that the most likely
5 explanation for this is that people with this rare type of
6 condition are presenting to both family physicians and
7 chiropractors and that their treatments from both or
8 visits to both are not in the causal pathway.
9 Q But your study did not conclude that neck
10 manipulation does not cause strokes, do they?
11 A There are several potential explanations for --
12 Q Did you conclude that, yes or no?
13 A No, we didn't, but I'm trying to tell you now
14 what the other explanation is, and we do state that in the
15 paper, too. It's also possible that both --
16 MR. PATTIS: Objection to the narrative.
17 This is non-responsive to the question at this point.
18 MS. MOORE LEONHARDT: I would ask that the
19 witness be allowed to provide the answer. The Public
20 Member indicated at earlier hearings that she wanted to
21 hear everything, and I think the Board embraced that
22 notion, and everything has come in, and Dr. Cassidy has
23 come in here to explain the study that was --
24 MR. PATTIS: Again, I thought we were going

1 to give simple reasons or legal bases for our objections
2 and avoid speaking objections.
3 MR. SHAPIRO: Okay. I would suggest, based
4 on the Board's comments, that the objection be sustained
5 and he be allowed to answer the question or respond as he
6 sees fit. Dr. Cassidy, you can continue.
7 A Now I've forgotten the question.
8 Q Let's back up for a second. What I asked you
9 was you did not conclude, did you, that neck manipulation
10 does not cause stroke?
11 A Right, we did not, and there are potential --
12 the other potential causal explanation that I was about to
13 tell you is that we can't rule out that both chiropractors
14 and family doctors are causing a stroke.
15 The study can't do that, but we think it's
16 quite unlikely that the family doctors are causing
17 strokes, so when we look at the associations between
18 family doctors' care and this type of stroke and
19 chiropractic care and this type of stroke, the
20 associations are equal. There's no difference, so that's
21 why we say there's no excess risk.
22 And, in fact, it's interesting. When we do
23 the stratified analysis and look at visits to family
24 doctors and chiropractors, who had headache and neck pain,

1 both risks or associations go up, but, again, they
2 overlap.
3 This would indicate to us that people who
4 are in the prodrome of this type of stroke are having neck
5 pain and headache, which is confirmed by other studies,
6 causing them to seek care from chiropractors and family
7 doctors, and that's why we set up the study the way we
8 did, to investigate this issue, which we in epidemiology
9 call confounding by indication.
10 In other words, the person is already in
11 the prodrome of the outcome when they have the exposure or
12 exposure being the chiropractic or family physician care.
13 Q Your study also concludes, quote, "First, our
14 case control results agree with past control studies that
15 found an association between chiropractic care and VAD and
16 VBA stroke," correct?
17 A Correct.
18 Q It goes on to say, "Second, our case crossover
19 results confirm these findings using a stronger research
20 design with better control of confounding variables,"
21 correct?
22 A Correct.
23 Q Can you explain to us -- there's been a lot of
24 discussion previous to your testimony about the use of

1 coding and codes in your study. Can you explain to us,
2 you know, how you developed that methodology and what
3 significance of that methodology?
4 A This issue is a difficult issue to study,
5 because it's such a rare event, and really the only way to
6 accumulate enough person years at risk is to use health
7 administrative data, so, in Ontario, during the period of
8 this study, every visit to a chiropractor's office and
9 every visit to a family physician's office was coded into
10 a database, called OHIP, which is the Ontario Health
11 Insurance Plan.
12 During that same time, across Canada every
13 hospital discharge is coded in a separate database for all
14 Canadians, and in this database discharge diagnoses, such
15 as stroke, or myocardial infarction, or cancer, whatever
16 the person is what the main reasons and secondary reasons
17 that they present to hospital, are separate from the OHIP
18 database are also coded in this other database.
19 So we used the OHIP database to capture
20 family physician visits and chiropractic visits in the
21 Ontario population, and then we linked it to the Canadian
22 Institutes for Health database, the discharge abstract
23 database, or the hospital discharge database to link it to
24 strokes.

1 And we studied over 109 person years at
2 risk. In other words, we studied the whole Ontario
3 population over a period of nine years, and even in that
4 population, we found only 818 strokes, vertebrobasilar
5 artery strokes, and in the group that we're really
6 interested in, those under 45 years of age, we only found
7 102, so it's a very rare event.
8 Those codes are used, because they're the
9 codes used in these databases.
10 Q Did you use the code for VAD in your study?
11 A No.
12 Q Why?
13 A VAD, meaning vertebral artery dissection?
14 Q Correct.
15 A No, we didn't.
16 Q Can you explain why?
17 A Yes, I can. The CIHI database, or the hospital
18 discharge database, uses ICD 9 codes and only goes to the
19 fourth digit, so the code for dissection of vertebral
20 artery is 443.24, and that code is not in the database, so
21 some of these databases code to five digits, some to four
22 digits, so that's a limitation in the database.
23 There's also a second reason we didn't use
24 it, and that is because the code, itself, isn't used very

1 much, and it would be used as the secondary code. The
2 only reason that people with a dissection would present to
3 a hospital is because they have a stroke, otherwise, most
4 dissections would go undetected, so it would be a
5 secondary diagnosis anyway.
6 And if you look at all the studies on this
7 issue, the cases are captured, because they have a stroke
8 or a transient ischemic attack, which brings them to a
9 hospital, and then, later, they're investigated and found
10 to have a dissection.
11 Q But you did use the proper codes for occlusion
12 and stenosis, correct?
13 A Yes, we did.
14 Q Why would you include those and not include VAD?
15 A Because those codes are four digits, rather than
16 five, so even if we had the fifth digit -- well and we
17 didn't, so there's no point in talking about that. The
18 CIHI database only codes to the fourth digit, so basilar
19 artery stenosis and occlusion the code is 433.0. For
20 vertebral artery it's 433.2. That's to four digits.
21 To also search for dissections of the
22 vertebral artery, that's 443.24, so the four is not
23 available in the CIHI database. They do not code to the
24 fifth digit.

1 Q But there is a code VAD?
2 A Yes. I just told you.
3 Q Right, and you didn't use it?
4 A Well it's not available in the database, so we
5 can't use it. That's the first reason I gave you. The
6 second reason is that --
7 Q What do you mean, it's not available in the
8 database? It was never referenced in any of the cases you
9 reviewed, or you just didn't choose it to be one of the
10 categories that you would study?
11 MS. MOORE LEONHARDT: Objection to form and
12 argumentative.
13 MR. MALCYNSKY: It's a very clear --
14 Q Did you have trouble understanding the question?
15 A No, sir, I don't, and I've answered it. I've
16 told you that the CIHI database does not include codes to
17 the fifth digit. They only code to the fourth digit, so
18 that code isn't available in the database, but I think,
19 more importantly, if you want to study this issue, you
20 need to study stroke or transient ischemic attack, where
21 people present to a hospital, otherwise, most dissections
22 would go undetected unless they result in a neurologic
23 event, so it wouldn't change the study, even if the code
24 was available.

1 Q You can probably tell I'm not a scientist, so
2 bear with me, but would you agree, though, that to conduct
3 a study, which excluded what we have heard testimony on as
4 being one of the three potential causes of stroke, how is
5 that not a fundamental flaw in the study?
6 A It's not a flaw in the study, because the issue
7 that we're concerned about is stroke. Vertebrobasilar
8 artery dissections are cause for VBA stroke.
9 Q Right, as is stenosis and --
10 A But I mean what we're interested in is the
11 stroke outcome, not the vertebral artery dissection.
12 Q In your study, Dr. Cassidy, did you also review
13 medical records, or hospital records, or doctor's office
14 records?
15 A No.
16 Q Can you explain why?
17 A Two reasons. The first is that when you access
18 Ontario health data and hospital separation data, there
19 are laws in Canada and in Ontario on privacy, so when you
20 have access to that data, you don't have access to
21 identifying information. That's part of getting the
22 ethics to do this type of study.
23 Secondly, I think it would be very
24 difficult to go through and find these medical charts for

1 818 people over a nine-year period. It would be very
2 costly. In fact, that's what the medical abstractors do
3 when they abstract the stroke codes into the CIHI
4 database.
5 Q From your review of the data and your research,
6 could you conclude whether or not a patient had had a
7 cervical manipulation performed by the chiropractor or
8 not?
9 A Did we conclude that?
10 Q In other words, in your review of records, which
11 included chiropractic visits, could you conclude, or does
12 your research indicate that someone had had a cervical
13 manipulation or not?
14 A We assume that if there was a billing code for a
15 cervical problem or a headache, that that would likely be
16 treatment to the neck.
17 Q But you didn't specifically --
18 A I wasn't -- no one in the study group was in the
19 office of the chiropractor when the treatment was given.
20 Q All right, so, you don't know?
21 A We could not have access to their records to see
22 exactly what they did.
23 Q So if someone had presented themselves to a
24 chiropractor for a problem with their tailbone, as we've

1 heard one of the victims here testify, they would not have
2 been picked up in your study, correct?
3 A Yes, they would.
4 Q I thought you said only if they indicated for
5 head and neck pain.
6 A No. If you go back to Table Seven, you can see
7 we looked at all visits to chiropractors, as well as
8 visits for just the conditions coded for the headache and
9 neck pain, so we ran the analysis for all visits, and we
10 ran the analysis for headache and neck pain.
11 The reason we did that is because, of
12 course, there are limitations in coding, and there are
13 errors in coding, so we wanted to look at all visits.
14 Q But you don't think it's significant what type
15 of care they received in the chiropractor's office?
16 A Of course I think it's significant.
17 Q So why wouldn't we have focused more on cervical
18 manipulation than on broader categories of chiropractic
19 care?
20 A Well because the prevailing theory is that
21 cervical manipulation is a risk factor in some circles, so
22 that's why we would look specifically at visits that were
23 coded as cervical visits.
24 Q So now you're telling me you did focus on cases

1 involving chiropractors that had administered a cervical
2 manipulation of the neck, specifically? You told me --
3 I'm confused. Maybe I'm misunderstanding what you're
4 saying.
5 A I'm confused by your question.
6 Q Okay. I thought what you did was look at
7 chiropractic care.
8 A We did.
9 Q Generally, which is what you said.
10 A We did.
11 Q In terms of the methodology for the study. My
12 question was why did you not focus on patients that had
13 cervical manipulations of the neck, and I thought you just
14 said you did.
15 A We did.
16 Q Well which is it?
17 A We did both, and, again, if you look at Table
18 Seven, you can look and see, under exposures, we looked at
19 any DC visit, so that would be a visit for anything, and
20 then we looked more carefully, down further, you can see
21 we looked at headache or cervical DC visits, so we looked
22 at all visits, and then we looked more narrowly at visits
23 that were coded for headache and neck pain, and when we
24 did that, the associations were stronger.

1 Q Stronger with cervical manipulation of the neck?
2 A With the cervical codes, yes.
3 Q Right.
4 A And they were for the physicians, too. Their
5 estimates went up, too.
6 Q Their estimates if they performed some type of
7 manipulation of the neck?
8 A No, no. If the visit was coded as a headache or
9 a cervical spine problem.
10 Q Would you expect that there be a higher degree
11 of association between chiropractic care that involved a
12 specific manipulation of the neck?
13 A Would I --
14 Q Would there be a higher association with a risk
15 for stroke when there's a cervical manipulation than when
16 there's not?
17 A First of all, I want to use the term
18 "association," so you can use the term "risk," but we're
19 talking about associations here.
20 Q Okay. We'll use your term.
21 A Well I'd like to make this clear, and maybe the
22 Board should know this from an epidemiologist, that there
23 is a difference between risk and association. Studies can
24 provide information on association, but risk is something

1 that is, when someone looks at the risk of something, they
2 have to take in the best evidence and then make causal
3 reasoning, so when I'm talking about the estimates here,
4 I'm talking about an association.
5 When I talk about risk, I'm talking about
6 the reasoning that would come from this study and other
7 studies.
8 Q Okay.
9 A It's a subtle, but important difference, and I
10 think it's come up in this chamber earlier.
11 Q It has.
12 A Yeah.
13 Q Thank you. In terms of evidence of association
14 between cervical manipulation and risk of stroke, is not
15 the conclusion of a court after a trial that there has
16 been a causal relationship between the treatment
17 administered by a physician and a result in stroke? Is
18 that not evidence in another form, not a study, but is
19 that not evidence, as well, of the association between the
20 manipulation and a stroke?
21 A That's a very long question.
22 Q Well we've had several witnesses testify that
23 they have gone to a chiropractor and experienced a stroke.
24 Several of them also testified that the chiropractors

1 paid them money to settle their cases, in some cases, as
2 much as, you know, hundreds of thousands of dollars.
3 Some have been told by their chiropractors
4 that they can't disclose how much they were paid. Is that
5 not evidence of an association between a cervical
6 manipulation and a stroke?
7 A Well you're asking a scientist about legal
8 evidence, so I don't know what that decision was based on,
9 what science that decision was based on. I'm more
10 comfortable talking about scientific evidence.
11 MR. MALCYNSKY: Excuse me for one second.
12 MR. MICHAEL ABELSON: Mr. Chairman, may I
13 be recognized for a second, please? My name is Michael
14 Abelson. I am the attorney for Susan Hoffman.
15 COURT REPORTER: I can't hear you.
16 MR. ABELSON: My name is Michael Abelson. I
17 am the attorney for Susan Hoffman, who testified here on
18 Tuesday. I can tell you that the medical examiner in her
19 --
20 MR. SHAPIRO: No. Counsel --
21 MS. MOORE LEONHARDT: I object.
22 MR. SHAPIRO: Counsel, I'm sorry. You
23 cannot be recognized here to provide evidence or
24 testimony. You're representing a witness.

1 MR. ABELSON: This testimony that we --
2 MS. MOORE LEONHARDT: I think that the
3 witness should be removed. This man should be removed
4 from the chambers.
5 MR. PATTIS: May we take a brief recess,
6 please?
7 MS. MOORE LEONHARDT: We should be off the
8 record.
9 MR. SHAPIRO: I don't think we need to take
10 a recess. Counsel, you're not recognized at this hearing.
11 MR. ABELSON: I don't know how you can --
12 MR. SHAPIRO: Counsel. Counsel.
13 CHAIRMAN SCOTT: A little decorum here,
14 please. Thank you. Please continue.
15 MR. MALCYNSKY: I just had asked for one
16 minute. I'm just trying to locate a document.
17 CHAIRMAN SCOTT: Okay.
18 MS. MOORE LEONHARDT: May we go off the
19 record for a moment, Attorney Shapiro?
20 CHAIRMAN SCOTT: Okay. We're going to take
21 a five-minute break. Only five minutes.
22 MS. MOORE LEONHARDT: Thank you.
23 (Off the record)
24 DR. POWERS: Please, everyone, be seated.

1 Thank you.
2 CHAIRMAN SCOTT: Okay. We're going to go
3 back on. Attorney Shapiro is going to be making a quick
4 statement.
5 MR. SHAPIRO: Just for the record, any
6 disruptive behavior by any party, intervenor, or otherwise
7 will certainly be cause for removal from the hearing.
8 There's a lot of information. people's emotions are high
9 in this case, but we're going to conduct this hearing in a
10 way that's appropriate.
11 Attorney Malcynsky, I believe you were
12 continuing your questioning?
13 MR. MALCYNSKY: Yes, thank you.
14 Q Dr. Cassidy, before we adjourned briefly, I
15 asked you about the testimony from previous witnesses, who
16 had been victims of stroke and had filed legal claims, and
17 you said you couldn't opine, as to the legal theories, I
18 believe, or you had no comment about the legal conclusions
19 of those cases, but in our pre-filed testimony, and
20 they've been admitted into evidence here, there are
21 autopsy reports and pathologist reports from medical
22 examiners, which specifically reference stroke caused by
23 cervical manipulation. Is that not medical evidence?
24 MS. MOORE LEONHARDT: Objection to form and

1 move to strike the speech by Attorney Malcynsky.
2 MR. MALCYNSKY: I'm not making a speech.
3 I'm asking a question.
4 MR. SHAPIRO: I would recommend the
5 objection be overruled.
6 Q Do you understand the question? Are medical
7 reports and autopsy reports medical evidence?
8 A Medical evidence, meaning court evidence?
9 Q Are they medical evidence of the causation of a
10 stroke by a cervical manipulation?
11 MS. MOORE LEONHARDT: I also object it's
12 beyond the scope of the Direct. The witness is here to
13 testify on the ICA's position, and he's also testifying
14 about the study that he performed, which is the basis for
15 the ICA's position.
16 MR. PATTIS: Again, this is a speaking
17 objection.
18 MR. MALCYNSKY: Right. The witness --
19 MR. SHAPIRO: Counsel, wait. Attorney
20 Malcynsky, if you'd just wait one second? Attorney Moore
21 Leonhardt, I agree with Attorney Pattis, that we're going
22 to try to reduce speaking objections to the greatest
23 extent possible.
24 If your objection is beyond the scope of

1 Direct, I can understand that, and if I need more
2 information in order to advise the Board, I can request
3 that from any of the parties or intervenors. I would
4 recommend that the objection be overruled.
5 A I think you're using the term "medical
6 evidence," and I'm more comfortable with the term
7 "scientific evidence," and case reports are not good
8 scientific evidence.
9 Q Why?
10 A The reason for that is there's no control group,
11 and that's the strength of this case control study.
12 There's a control group. There are lots of case reports
13 of all sorts of different things, and they can raise
14 hypotheses, and these case reports have definitely raised
15 the hypothesis, but the hypothesis that chiropractors
16 cause stroke can only be tested in an analytic study.
17 An analytic study is a study that has a
18 control group. You have to have a reference to
19 investigate risk. You cannot investigate risk on a single
20 case.
21 Q And --
22 A So those cases may carry weight in court, but
23 not in the scientific field.
24 Q So if a scientist, a pathologist concludes,

1 based on a physical examination of a human body, that
2 there was a cause of death, you give no weight to that,
3 whatsoever?
4 A No. I trained as a pathologist, so I do give
5 weight to that.
6 Q Okay.
7 A So if there is a dissection and it caused death,
8 I would accept that, and I would accept, if there's no
9 pathological evidence of a stroke on autopsy, I would
10 accept that. I think the problem here is that you're
11 trying to take that one step further into talking about
12 the cause of that dissection or the cause of that stroke.
13 To do that, you have to do an analytic
14 study. You need a control group. A single case report
15 does not prove causation of the pathology. You can do an
16 autopsy and see the pathology. That doesn't mean you can
17 make the inference whatever caused that pathology.
18 Q So whenever a medical examiner indicates a cause
19 of death, you don't believe that they're doing that based
20 on their ability to conclude what the cause of death was?
21 A If a medical examiner or pathologist finds a
22 tumor in the brain, I believe that they can say there's a
23 tumor in the brain, but they might not be able to say that
24 that's due to some past chemical exposure, so I think

1 that's where I'm drawing the difference.
2 Q So -- never mind.
3 MR. MALCYNSKY: I have no further
4 questions. Thank you.
5 MR. SHAPIRO: Thank you. Attorney Pattis?
6
7
8 CROSS-EXAMINATION
9 BY MR. PATTIS:
10 Q Good morning, Dr. Cassidy. How are you?
11 A Good morning.
12 Q I won't have many questions. One is a very
13 foolish one, perhaps. I'm looking at your report and the
14 section labeled "Cases." Do you have the report before
15 you, sir?
16 A Yes, I do.
17 Q Again, these aren't trick questions. They may
18 sound like it. Generally, you'll know that they're a
19 trick question when my voice raises an octave or two from
20 what I'm --
21 A Could you speak up, please?
22 Q I said, generally, I said these may sound like
23 trick questions, but they're not. You'll generally know
24 with me that I think I'm on to something when my voice

1 raises an octave or two, okay?

2 I'm looking at the cases. We included all

3 incident of vertebrobasilar occlusions and stenosis

4 strokes, ICD 9433.0 and 433.2. That was the dataset that

5 was used to identify the control.

6 A Can you, just so I can follow along exactly

7 where you're reading, can you tell me where you are?

8 Q It's in the section called "Cases," under

9 methods at S-177.

10 A Right.

11 Q And ICD 9433.0 was one class of incidence that

12 you relied upon in your study, am I correct?

13 A Yes.

14 Q And 433.2 was another class, correct?

15 A That's correct.

16 Q Now this is where I confess sheer and utter

17 ignorance. In your earlier testimony today, the dataset

18 was unable to capture a five digit number. Did you mean

19 to say a two decimal point number?

20 A Yes.

21 Q Okay, so, to clarify the record, because 9433.0

22 is five digits, but the 433.24 is also five, so really

23 what you were saying is they couldn't go to the second

24 decimal point, am I correct?

1 A I think the journal Spine should have put a
2 space between the nine and the 433.0, so there may be a
3 space missing there, so it's ICD 9 code, 433.0, so it's a
4 four-digit code.
5 Q That's an error that was repeated twice,
6 correct, because you look down into what's excluded,
7 correct?
8 COURT REPORTER: One second.
9 A I see it there.
10 Q Okay. Okay, so, a correct reading of this would
11 be that a class of numerical entries, known as ICD 9
12 codes, were used, and within that class there was 433.0
13 and 433.2, correct?
14 A Right.
15 Q And that the inability to carry to the fifth
16 digit, then, is also of necessity the second decimal
17 point?
18 A Yeah. You put it best.
19 Q Okay.
20 A Two decimal points.
21 Q All right. Probably the last time I'll put
22 something best. There's a similar error, then, in the
23 editing of the report, where they report an ICD 9438.
24 That should be an ICD 9, space, 438, correct?

1 A Right.
2 Q Okay, now, with respect to these codes, I'm
3 simply trying now to understand how the raw data was
4 generated. In other words, what it is that you examined
5 and where it came from. That's what this class of
6 questions pertains to.
7 As I understand, the source population
8 included two data sources, correct?
9 A Yes.
10 Q The first was discharge abstract data from --
11 how did you refer to that, CIHI?
12 A CIHI.
13 Q CIHI. Sorry about that. Now this discharge
14 abstract data, what exactly is that?
15 A That's data that's abstracted by professional
16 abstractors at the hospital on the primary cause for the
17 hospital admission and secondary, tertiary, etcetera,
18 causes.
19 Q Okay, so, if I understand what you're saying,
20 this data -- an abstractor is a person who receives an
21 orientation and training and is given a set of materials
22 to look at and is taught to look for certain things in a
23 uniform manner, correct?
24 A Well they would look at the discharge summary by

1 the physician who is in charge of that patient when
2 they're in the hospital.
3 Q That's a particular application. I'd like to
4 focus on general principles first. You're an
5 epidemiologist, in part, by training, correct?
6 A I am a trained epidemiologist.
7 Q And abstractors are a pivotal, play a pivotal
8 role in the gathering of epidemiological data, do they
9 not?
10 A In some cases, yes.
11 Q Because what an abstractor does, they conduct,
12 in essence, the field work. They go out and collect that
13 which may or may not yield significant conclusions. Am I
14 correct in that?
15 A Yes.
16 Q Thus, in this case, abstractors -- withdrawn.
17 Did you, as part of your study, provide the orientation
18 and training to the abstractors, so that they would know
19 what to look for?
20 A No. CIHI provides training for their
21 professional abstractors.
22 Q Did you, then, contract with CIHI and give CIHI
23 an understanding of what you were looking for?
24 A No, because we already know what data CIHI

1 collects.

2 Q Okay, so, if I understand what you've told me,
3 then, CIHI is in the business of abstracting data, and, as
4 an epidemiologist, you were familiar with the types and
5 sorts of data they collected, correct?

6 A Yes.

7 Q And, thus, in terms of framing this study, you
8 were trying to isolate a suitable control group to test a
9 hypothesis against a non-control group, fair enough, the
10 hypothesis being whether there was a higher incidence of
11 stroke related to a chiropractic visit?

12 A We didn't look at incidence. We looked at
13 associations.

14 Q Fair enough. But I guess the distinction I'm
15 drawing is associations between things, and I'm using the
16 term "incident" to refer to those things that are --

17 A Well --

18 Q Excuse me. I'm using the term "incident" to
19 refer to those things that may or may not be associated.
20 Is that an incorrect usage of the term "incident?"

21 A We looked at incident cases --

22 Q Is that an incorrect use of the term "incident,"
23 sir?

24 A Well I'm not sure, because I'm not sure how

1 you're using it. You'd have to be more specific.
2 Q I will be. The abstractors that work for CIHI
3 were in the business, then, under CIHI's supervision of
4 identifying data, correct?
5 A Right.
6 Q And you, as the -- were you the principal
7 architect of this study, sir?
8 A I'm the first author.
9 Q That usually means the person who is most
10 responsible.
11 A Yeah, but it was a study team.
12 Q Were you the principal architect of this study,
13 sir?
14 A I'm the principal investigator, yes.
15 Q And, by "principal investigator," do you mean
16 that it was your -- well withdrawn. Who were the persons
17 who generated the research question? In other words, how
18 was this hypothesis that you were seeking to test here
19 generated? Was it a committee process?
20 A It was generated by a committee, yes.
21 Q And who chaired the committee, if there was one?
22 A This study was designed by the Bone and Joint
23 Task Force, which published its findings in Spine, and
24 this paper was one of it, and that's a group of about 35

1 clinician scientists from around the world.
2 Q What sort of clinician scientists, sir?
3 A What sort of clinician scientists?
4 Q In other words, orthopedic surgeons?
5 A Yes.
6 Q Okay and chiropractors, as well?
7 A Yeah. There's a whole group of different
8 clinician scientists.
9 Q I don't mean to be rude to you, but I'm sort of
10 asking a specific question. There are orthopedic surgeons
11 involved, correct?
12 A Yes, there was.
13 Q And chiropractors, as well?
14 A Yes.
15 Q Working collaboratively, correct?
16 A Yes.
17 Q Okay.
18 A There were others, too.
19 Q Understood, and, as I say to my wife when we're
20 at the mall, we can buy everything. We just can't do it
21 all at once, at least not on my income, so one question at
22 a time.
23 The abstractors, then, for CIHI looked at a
24 class of data that you know as a discharge abstract

1 database, correct?
2 A Correct.
3 Q And the discharge abstract database reports data
4 in what form, sir? Is it in the form of ICD 9 codes?
5 A Yes.
6 Q Okay. Who does the ICD 9 coding?
7 A The abstractor.
8 Q The ICD 9 coding is done at the point where care
9 is given, is it not?
10 A Not for CIHI, no.
11 Q Okay, so, what happened, then, is that the
12 abstractors had the discretion to interpret data and
13 translate it into an ICD 9 number, am I correct?
14 A I think so, yes.
15 Q And, again, I don't mean to be rude, but one
16 reason people despise lawyers is that when an honest
17 person says "I think so," that just invites the lawyer to
18 ask another question. Do you know, or is that simply what
19 you're assuming?
20 A That's my understanding, yes.
21 Q That's an assumption you're making?
22 A No. That's my understanding of CIHI.
23 Q Okay. Your understanding of CIHI is based on
24 your discussions with them of how they train the

1 abstractors who gather this data?

2 A No. I didn't have direct discussions with CIHI,

3 but the biostatisticians, two of them that worked on the

4 project, had extensive experience with CIHI data.

5 Q Okay and a biostatistician is a person who

6 applies basic statistical methods to data of interest in

7 the health sciences, correct?

8 A Correct.

9 Q And the abstractors were persons, then, who

10 translated data from the site at which care was given into

11 ICD 9 codes. Is that a fair statement?

12 A Yes.

13 Q Now the data that was collected at the site at

14 which care was given, that was discharge data?

15 A Yes.

16 Q And discharge data, then, is data that is

17 generated at the time a person is released from the care

18 of that institution?

19 A Yes.

20 Q And, as I understood your testimony earlier,

21 that would include or could potentially include for a

22 given patient primary, secondary and tertiary causes of

23 why they had sought the treatment, correct?

24 A Correct.

1 Q That would be a retrospective assessment, based
2 on the treatment of the patient, of why they were there,
3 correct?
4 A I think it's based on the condition that they
5 present to hospital and the main condition that they're
6 treated for.
7 Q But those are different things, aren't they,
8 because what a person presents to the hospital with could
9 largely be their subjective presentation. I have a
10 headache, for example, correct?
11 A Yeah.
12 Q And the cause of that headache could be a number
13 or a multiple of different things, fair enough? You would
14 agree with that?
15 A Yeah. The CIHI --
16 Q And, sir, with respect to the distinction --
17 A I'm trying to answer your question, sir.
18 Q You did, sir.
19 A Can I answer it?
20 Q You did.
21 A No, I didn't.
22 Q You said yes, and that I took to be a
23 satisfactory answer.
24 MR. SHAPIRO: Counsel, allow him to finish

1 his answer, please.
2 A The CIHI abstractors look at the discharge
3 summary, and they choose the most important condition, so
4 if someone presented with a headache and then had a
5 stroke, for example, the stroke would be coded before the
6 headache.
7 Q That's not responsive to my question. I'm
8 simply trying to draw a simple distinction --
9 A Well, then, I didn't understand your question.
10 Q And I'll be happy to rephrase it.
11 A If you could be clearer about your question,
12 I'll try to answer it.
13 Q I think the question was very clear, but I'll
14 repeat it for you.
15 A Could you repeat it?
16 Q I will be happy to.
17 A Thank you.
18 Q With respect to the presentation -- and you do -
19 - have you provided care, medical care to people?
20 A No. I'm not a medical doctor.
21 Q Have you provided chiropractic care to people?
22 A Yes, I have.
23 Q So is it fair to say that a common phenomena in
24 providing treatment of care to a patient is that a patient

1 comes in and makes what you would refer to as a subjective
2 complaint?
3 A Um-hum.
4 Q Is that a yes?
5 A Yes.
6 Q And the subjective complaint means why the
7 patient has come to see you, correct?
8 A Correct.
9 Q And one of the things that you're trained to do
10 as a chiropractic provider is to diagnose that pain, to do
11 what's known as a differential diagnosis to rule out
12 certain conditions and to try to determine what it is that
13 is causing that person's pain to the degree that science
14 permits that, correct?
15 A Correct.
16 Q And there are confidence levels -- withdrawn.
17 With respect to the discharge abstract data, that was data
18 that was generated based on a course of treatment. In
19 other words, the course of treatment had been completed,
20 the record was reviewed, and then a code was entered,
21 correct?
22 A It would be based on the course of treatment and
23 the course of diagnostic investigations, because there may
24 have not been any treatment, other than supportive care.

1 Q What is a diagnostic investigation, sir?
2 A Well if you are sick and you present to a
3 hospital, you could undergo many different diagnostic
4 investigations to determine the cause of --
5 Q Okay, got it. With respect to the data that you
6 relied upon, you didn't have access to clinical charts,
7 correct?
8 A No. The abstractors had access to that and took
9 the codes from that.
10 Q You had access to the data that the abstractors
11 generated, correct?
12 A Correct.
13 Q With respect to the OHIP -- and what is OHIP
14 again, sir?
15 A Ontario Health Insurance Plan.
16 Q Okay, now, did abstractors also gather that
17 data?
18 A No, sir.
19 Q Okay. Who gathered the OHIP data?
20 A That data is inputted by the treating physician
21 and the treating chiropractor.
22 Q So is it fair to say, sir, that in -- okay. I
23 understand. I think I understand it, but let me make sure
24 that I do, since precision is everything here.

1 In that instance, a patient would present
2 to a provider, and I'll use provider to encompass both
3 chiropractors and physicians. Is that a fair use of the
4 term?
5 A I'm sorry. I didn't hear that.
6 Q Is a fair use of the term "provider" one that
7 includes both chiropractors and physicians?
8 A Yes.
9 MS. MOORE LEONHARDT: I object, because
10 that's argumentative.
11 MR. SHAPIRO: I'd recommend overruling the
12 objection.
13 MS. MOORE LEONHARDT: May I speak to it?
14 MR. SHAPIRO: No. Go on, counsel.
15 Q The provider -- is it fair to say, then, that
16 with respect to OHIP, that the provider coded what was
17 reported to OHIP?
18 A Yes.
19 Q What is the difference between CIHI and OHIP
20 data?
21 A One is hospital discharge data, and the other is
22 ambulatory care data.
23 Q So, then, is it fair, sir, to say that -- well
24 which is which?

1 A The CIHI is hospital discharge data, and the
2 OHIP is ambulatory care data. In other words, care that's
3 given outside of the hospital.
4 Q Was the study able to identify whether there was
5 an overlap between ambulatory care and hospital data?
6 A Overlap, meaning?
7 Q A person goes to a chiropractor or a physician,
8 let's say, and is discharged, but then subsequently goes
9 to the hospital.
10 A Well that's one of the strengths of the study,
11 in that we were able to put the exposures, that's the
12 ambulatory visits for physicians and chiropractors, before
13 the outcome, which is the discharge diagnosis for stroke.
14 Q That wasn't the question, and I'm sorry if I was
15 unclear. Hypothetically, suppose that a person went to a
16 physician complaining of a headache, and the guy said take
17 two Advil and call me in the morning, and the person
18 walked out of his door and collapsed, due to a stroke, and
19 the physician misdiagnosed the stroke, and the patient was
20 then taken to a hospital and stroke was diagnosed.
21 I presume, in that instance from the
22 ambulatory perspective, there would be some code for
23 stress headache, or whatever the code might be, but, yet,
24 at the hospital, there would be a far more ominous code, a

1 stroke code, for example. How does your data account for
2 that sort of phenomena if it does at all?
3 A That's a very good question, and if you look at,
4 for example, let's go back to -- let's use Tables Three
5 and Four.
6 Q I'm there.
7 A So for Table Three, you'll see different, in the
8 far left-hand column, this is the odds ratio and 95
9 percent confidence intervals and accelerated and bias
10 corrected bootstrap 95 percent confidence interval case
11 control estimates of the association between chiropractic
12 visits and vertebrobasilar stroke.
13 On the left-hand side is a column that
14 says, "Exposures."
15 Q I see that.
16 A And you can see the first heading is "Any DC
17 Visit."
18 Q Um-hum.
19 A And you can see the first what we call there are
20 a group of exposure windows under that, so the first
21 exposure window is zero to one day, so that's the first 24
22 hours prior to the stroke.
23 If you flip over to Table Four, this is
24 odds ratios and 95 percent confidence intervals in

1 accelerated and bias corrected bootstrap 95 percent
2 confidence intervals case control estimates association
3 between primary care physician visits and vertebrobasilar
4 stroke.
5 Again, on the left column, you see
6 "Exposure," and then you see "Any Primary Care Visit."
7 Q I see it, yes.
8 A Underneath there, you see "one-to-one," instead
9 of zero-to-one.
10 Q Um-hum.
11 A So what we did to address the bias that you're
12 talking about is that we did not include primary care
13 visits the day of the stroke, whereas, in the
14 chiropractor, we did include chiropractic visits the day
15 of the stroke.
16 Q So when it says "zero," I'm looking at Table
17 Three, when it talks about exposures there, distinguish
18 for me the data that is captured in the zero to one day
19 row from that which is captured in the zero to three-day
20 row. In other words, what's the difference?
21 A Right, so, zero to one would be the first 24
22 hours prior to the stroke. Zero to three would be the
23 first 36 hours prior to the stroke.
24 Q So is what triggers the time interval here, the

1 visit to the chiropractor, that is the zero point, sir?
2 A No. The index date is the date of the stroke.
3 Zero time is the date of the stroke.
4 Q So is it your testimony, then, that a person
5 presents somewhere with a stroke, and based on a
6 reconstruction of records or some retrospective analysis
7 that's able to be determined --
8 A It's a data linkage between CIHI and OHIP.
9 Q Let me finish. You're in a different universe
10 than I am on that issue, and I'm trying really just to get
11 the basics.
12 A Okay.
13 Q The stroke is the triggering event, correct?
14 A That's what we call the index event, triggering
15 event, if you'd like.
16 Q Well the index -- I will use your terms. I'm
17 here to learn. The index event is the stroke, and where
18 does the patient present with that stroke?
19 A To the hospital.
20 Q Okay, so, is it fair to say, sir, that with
21 respect to your study each stroke event was a stroke that
22 was initially reported at a hospital?
23 A Yes.
24 Q Did you make any attempt to capture that data if

1 there is -- well, withdrawn. Are you aware of whether
2 there is data involving strokes that occur at a
3 chiropractor's office?
4 A Am I aware of data? You have to ask that
5 question again. I'm not following your question.
6 Q Okay. Again, I may not understand it.
7 A I'll try and explain it, if I can.
8 Q No, I know. I say that by way of apology to
9 everyone here. The index event is presentation at a
10 hospital with a diagnosed stroke, am I correct?
11 A Yes.
12 Q Was there another source of indexed events in
13 the data?
14 A No.
15 Q Okay, so, again, at the risk of being tedious,
16 all indexed events, then, are strokes initially diagnosed
17 at a hospital, correct?
18 A Right.
19 Q Are you aware of any data that suggests that
20 strokes were first reported at a chiropractic office?
21 A No.
22 Q Okay. You assumed, for methodological purposes
23 and given your clinical experience, that all strokes
24 ultimately result in hospitalizations, however, correct?

1 A Yes.
2 Q And, thus, when it came time to constructing the
3 data about the visit to a chiropractor, the abstractors
4 were able to say, well, this person reported, and I'm
5 looking, for example, at the third row on Table Three,
6 they reported to the hospital on the seventh day, and they
7 say they were at a chiropractor six days earlier. That
8 would be included within that row?
9 A What you're saying isn't quite correct, because
10 the visits to chiropractors were in the OHIP database, and
11 the strokes were in the CIHI database, and that's one of
12 the big strengths of the study, is that the exposures and
13 the outcomes were collected in population databases
14 covering the same population.
15 Q I know that you regard the study as strong, but
16 I would ask you to let the Board make that assessment.
17 Can you repeat what you simply said again? The OHIP
18 database reflects what, sir?
19 A First of all, I said it's a strength of the
20 study. The study also has limitations.
21 Q Sir, the OHIP database reflects what?
22 A Ambulatory visits.
23 Q To just chiropractors?
24 A And to physicians.

1 Q All right. That's right. OHIP reflects a visit
2 to any provider in their office -- I'm never going to get
3 this right. And CIHI are hospitalizations, correct?
4 A Yes.
5 Q I'm looking at Table Three, and I'm puzzled by
6 one thing, in particular, with respect to exposures. How,
7 if you know, did the abstractors avoid overlapping
8 datasets? For example, the rows reflect zero to one, zero
9 to three, zero to seven, suggesting that zero to one could
10 be, as a matter of logic, included within zero to three,
11 and that zero and one and zero to three, as a matter of
12 logic, would be included in zero to seven.
13 Wouldn't the better way to have done this
14 study would be zero to one and then two to three and four
15 to seven?
16 A Not necessarily, no.
17 Q How did you avoid that overlap?
18 A Pardon me?
19 Q How did you avoid overlap or inappropriate
20 aggregation of subclasses within these?
21 A It's not inappropriate.
22 Q How do you know that someone that is within the
23 zero to one group is not included in the zero to three
24 group?

1 A Well they are. It's a cumulative.
2 Q Okay. Now you have adopted the testimony of the
3 ICA for purposes of your presentation here today?
4 A Yes.
5 Q And I presume that means -- and I don't mean to
6 be a smart-aleck. It may sound that way. You've read
7 through it before adopting it?
8 A Yes, I have.
9 Q Were you involved in preparing it?
10 A No.
11 CHAIRMAN SCOTT: What document are we
12 looking at?
13 MR. PATTIS: Sir, that's No. 36, I believe.
14 CHAIRMAN SCOTT: Thank you.
15 MR. PATTIS: I hope. May I have one
16 moment, please?
17 Q I'm looking, sir, at page three of the ICA
18 testimony. Are you there?
19 A Yes.
20 Q Midway through the paragraph, there's a sentence
21 that reads as follows. "Is it the intent of those
22 demanding a specific warning of a positive relationship
23 between chiropractic cervical procedures and stroke to
24 create a chilling effect on the public utilization of such

1 procedures for anti-competitive purposes?" What did you
2 mean by that?
3 A Can you direct me to the paragraph?
4 Q Yes, sir. If you look at the lower right-hand
5 corner, it will say page three. It won't say that. It
6 will be the numeral three, and then there are four blocks
7 of text within the page.
8 In the third full block from the top,
9 midway through the paragraph on the fifth line, there's a
10 sentence that reads, "Is it the intent of those demanding
11 a specific warning of a positive relationship between
12 chiropractic cervical procedures and stroke to create a
13 chilling effect on the public utilization of such
14 procedures for anti-competitive purposes?"
15 I'm simply trying to understand that. What
16 did you mean by that?
17 A Well I think that what that means is that there
18 are some people who would like to see a decrease in
19 chiropractic utilization and that people would be afraid
20 to have chiropractic care, because of the risk of stroke.
21 Q Who are those people that would like to see a
22 decrease? Are you talking about medical doctors?
23 A Who they are? I don't know.
24 Q Well you are aware of litigation, conceivably

1 sometimes frosty litigation in the United States,
2 involving pitting medical doctors against chiropractors,
3 up to and including a case that made its way all the way
4 up to the United States Supreme Court?
5 A Could you speak up? I can't hear you.
6 Q I can. I really have got to find the
7 microphone. You are aware that in the United States there
8 have been controversy pitting physicians, medical doctors
9 against chiropractors, and that that has sometimes reached
10 -- involved litigation?
11 MR. SHAPIRO: Counsel, the Board is
12 concerned about the relevance of this line of questioning.
13 MR. PATTIS: It will go to the coding
14 issues, and I'll get there in just a moment. If I could
15 get two more questions' latitude?
16 MR. SHAPIRO: Okay. Very briefly.
17 Q You're aware of that?
18 A I've heard of the anti-trust suit, yes.
19 Q And, thus, when the ICA says, at the bottom of
20 that paragraph, to distort, exaggerate, or make false
21 claims about danger or risk at the hand of any class of
22 health professionals for any reason, including anti-
23 competitive purposes, is to enter an entirely unacceptable
24 realm, and you agree with that, do you not?

1 A Yes.
2 Q And you agree, then, with the assessment that
3 there are competitive pressures in the market for health
4 services?
5 MS. MOORE LEONHARDT: Objection,
6 irrelevant.
7 MR. PATTIS: I'll tie it up in just a
8 moment with respect to coding and OHIP.
9 MS. MOORE LEONHARDT: I would ask counsel
10 to make an offer of proof. Coding and anti-competitive
11 activity are far a field from what the Board is
12 addressing.
13 MR. SHAPIRO: Counsel, I think there's
14 enough concern on the Board that we'd listen to an offer
15 of proof on this.
16 MR. PATTIS: All right. With respect to
17 the OHIP database, I believe, and the doctor will correct
18 me if I got it wrong, the OHIP database reflects data
19 collected by providers, which is the class of physicians
20 and chiropractors involved in giving ambulatory care.
21 This is on-site care, and, presumably, both
22 the physician and/or a chiropractor would enter that data
23 upon treatment of a patient and discharge of the patient
24 from that treatment event.

1 If, as the ICA's testimony suggests here,
2 physicians are prone to demand a specific warning to
3 create a chilling effect on the public utilization of such
4 procedures for anti-competitive practices, it strikes me
5 as equally likely to suggest that when there's coding
6 going on at a chiropractic office, those same competitive
7 pressures might apply, and, thus, an independent
8 chiropractor, who is coding a treatment, might or might
9 not be influenced by those competitive pressures to mask
10 the extent to which care may or may not cause harm.
11 The doctor may not have the ability to
12 comment on that, given the limitations of his study, but
13 it strikes me that, as the Board evaluates the data here,
14 it is entitled to take note of the sworn testimony of the
15 ICA, that there are competitive pressures within the
16 medical community that extend, that are directed toward
17 chiropractors from physicians and, by inference, toward
18 physicians from chiropractors, and that a study that
19 relies on this self-reporting of the group being studied
20 has limitations, and that's simply -- I can't say that
21 there was some -- you know, I'm not here like Joseph
22 McCarthy at the Senate hearing, not communist, you know,
23 are you now, or have you ever been a chiropractor, but I
24 do think it's fair to say that when a study relies on

1 aggregate data and the reporters for that aggregate data
2 are self-interested and have their own interest to
3 protect, the raw data isn't as pristine as it might
4 otherwise be.
5 MS. MOORE LEONHARDT: I'd like to move to
6 strike the speech. It was not an offer of proof, as I
7 understand it, and I certainly would expect that Attorney
8 Malcynsky would agree. That was not an offer of proof.
9 And, furthermore, the ICA testimony does
10 not make an accusation against physicians, and I'd like
11 that to be clear. That is not contained in that
12 statement. Counsel is misrepresenting the ICA's position,
13 and I think his inflammatory remarks should be stricken.
14 MR. MALCYNSKY: I actually think it was an
15 elegant offer of proof.
16 DR. POWERS: Hang on. This is Board member
17 Powers. I'd like to say something. It was a speech
18 followed by a speech, I think.
19 MR. PATTIS: I think --
20 DR. POWERS: Attorney Pattis, I listened to
21 everything you said. I understand, but if you're
22 suggesting that the chiropractors in Canada may have
23 changed the code, based on competitive pressures, even I
24 find that hard to believe, because we're talking about

1 neck pain and headache here. I mean what would they have
2 changed it from and to? It's a far stretch, I think.
3 MR. PATTIS: We'll get there eventually.
4 DR. POWERS: Well I'll tell you. Then I'd
5 like to call a motion on the Board and look at this. I
6 just make a motion that we sustain the objection.
7 MS. MOORE LEONHARDT: Thank you.
8 CHAIRMAN SCOTT: Is there any discussion on
9 the motion?
10 DR. MICHELE IMOSSI: I'm interested.
11 CHAIRMAN SCOTT: Do we have any other
12 discussion?
13 MR. SHAPIRO: The motion is, my
14 understanding is, to sustain the objection on the
15 relevance of this line of questioning.
16 CHAIRMAN SCOTT: May we have a vote on
17 this, please? All in favor?
18 VOICES: Aye.
19 CHAIRMAN SCOTT: Any opposition?
20 DR. IMOSSI: Opposed.
21 MS. JEAN REXFORD: Opposed.
22 CHAIRMAN SCOTT: Looks like we're carried.
23 MR. SHAPIRO: Attorney Pattis, you can move
24 on.

1 MR. PATTIS: Yes, sir.
2 Q With respect to the OHIP data, sir, would you
3 agree or disagree with the following, that the data
4 reflected in the OHIP database was reported by physicians'
5 and chiropractors' offices?
6 A Yes.
7 Q Okay. And referring now to S-177, again, sir,
8 are you there?
9 A Yes.
10 Q Okay. The cases included were then ICD 9, 433.0
11 and 433.2, correct?
12 A Correct.
13 Q The cases that were excluded also included ICD
14 9, 433.0 and a class of others, correct?
15 A Those were excluded before the study, yes.
16 Q I guess someone had to make a decision, it seems
17 to me, and I may be wrong about this, about which 433.0
18 events to include and which to exclude, correct?
19 A Correct.
20 Q Who made that decision, and what were the
21 criteria used for that decision?
22 A Those decisions were made by the study team in
23 consultation with other experts. I mean there are several
24 issues to think about. Do you have specific questions?

1 Q Yes. So we've now determined that the study
2 team -- withdrawn. How many 433.0 diagnoses were there,
3 an estimate? I'm not asking for an exact number.
4 A I call tell you the exact number.
5 Q Okay.
6 A If you go to Table One, there are 818 cases.
7 Q Okay, so, all 818 were included in the 433?
8 A Yes.
9 Q And some were included, and some were excluded,
10 correct?
11 A Well we had to -- you have to start the study on
12 a date, and when you start, you're collecting cases and
13 exposures. You have to have a period prior to that, where
14 you exclude all strokes, because if someone has a stroke,
15 they're at higher risk to have a second stroke.
16 Q Understood.
17 A So those exclusions were to exclude past
18 strokes.
19 Q Okay, so, in the cases section of the narrative,
20 immediately after superscript 24, where it says, "Cases
21 that had an acute hospital admission for any type of
22 stroke," that was a stroke prior to the triggering or the
23 incident event for purposes of this study, am I correct?
24 A Yes.

1 Q So all persons who had a previous history of
2 stroke were excluded from the study?
3 A Right.
4 Q Okay. And, thus, with respect to the 433s,
5 again, 433.2 and so forth, another way that this would
6 have been, could have been written would be to say that
7 persons with a prior acute care hospitalization for a
8 stroke of any sort were excluded. Would that be a fair
9 statement?
10 A Yes.
11 Q Okay.
12 A But that any stroke is based on the codes that
13 are listed in the paper.
14 Q I beg your pardon?
15 A But that any stroke is listed by the stroke
16 codes in the paper, so it's very clear which strokes we
17 excluded.
18 Q Well I thought I understood you, until you
19 clarified it, so now I'm confused, and I'm sorry to
20 everyone to force you through this. The initial dataset
21 included all incident vertebrobasilar occlusion and
22 stenosis strokes as coded under 433.0 and 433.2, correct?
23 A Correct.
24 Q And then, when you had that universe of data,

1 the team had to make a decision about what to exclude,
2 correct?
3 A Correct.
4 Q And the criteria for exclusion was a prior
5 history of stroke, however diagnosed, is that a fair
6 statement?
7 A Yeah. The diagnoses are listed in the sentence
8 that you read.
9 Q Don’t get ahead of me, because you’ll lose me.
10 I’m slow.
11 A Sorry.
12 Q 433.0 and 433.2, that was the universe. A
13 decision had to be made to fine tune that and for the sake
14 of reliability, fair enough? For the sake of a reliable
15 study.
16 A It’s a question of validity, not reliability.
17 Q Okay, fair enough. And, thus, those persons
18 with prior histories of stroke, however coded, were
19 excluded, correct?
20 A Right.
21 Q In terms of the overall manipulation of the
22 aggregate data, were there any anomalies that the team
23 noted between the CIHI data from hospitals and the OHIP
24 data reported from ambulatory care providers?

1 A I don't know what you're asking.
2 Q Things that were unexpected, anomalies, events
3 that were not anticipated that bore further inquiry. Were
4 there any issues that arose as you merged these two
5 databases?
6 A Anomalies?
7 Q You don't know what an anomaly is?
8 A I know what it is, but --
9 Q Okay. Were there any anomalies? I'm asking you
10 were there any?
11 MS. MOORE LEONHARDT: Objection. I think -
12 - I'm sorry. He's harassing the witness. The witness is
13 trying to answer the question.
14 Q Were there any irregularities, let me use a
15 different word, anything that left doubt that required you
16 to go back to the data and determine whether you were
17 comparing apples and apples?
18 A The data was given to us by the Ontario Ministry
19 of Health, and they prepared the database and gave it to
20 us.
21 Q I understand that, sir.
22 A Right, so, an anomaly --
23 Q But that's not my question. My question is, as
24 you looked at the data that you were given, did you notice

1 anything that was unusual, or surprising, or anomalous
2 that was unexpected?
3 A I don't know how to answer that. What do you
4 mean anomalous or unexpected?
5 Q Well --
6 A Can you give me an example?
7 Q If you're comparing apples and oranges, if
8 you're comparing apples and apples and a bunch of oranges
9 appear in one of the crates, you might conclude that you
10 were looking at different things. That's just a lay
11 analogy.
12 A But we weren't looking at apples and oranges.
13 Q I understand that. You were looking at stroke
14 presentation, correct?
15 A Right.
16 Q You were looking at stroke presentation, based
17 on data reported by others, correct?
18 A Reported in the two databases that we've
19 discussed, correct.
20 Q Reported by both hospitals and ambulatory care
21 providers.
22 A Well the strokes were reported in the hospital
23 database, the CIHI database, and the ambulatory visits in
24 the OHIP database.

1 Q I guess that really cuts to the nub of it. How
2 did you associate the OHIP data and the -- I've got to
3 look at it to make sure I get right. And the CIHI data.
4 In other words, if you're comparing strokes and visits,
5 you are comparing different things. What association were
6 you looking for?
7 A Right, so, in Ontario, we have universal health
8 care, so --
9 Q Congratulations. We --
10 A Pardon me?
11 Q Congratulations. Are you accepting citizenship?
12 A Thank you. And we're quite proud of that.
13 Q You should be.
14 A And there is an identifier that's used in a
15 central database that can link the two databases, and
16 that's done at the Ontario Ministry of Health.
17 Q Would that be a patient identifier?
18 A Yes.
19 Q Okay.
20 A It identifies the individual persons in the OHIP
21 and CIHI database, and that allows them to link the data,
22 remove any identifying information, and then send it to
23 us.
24 Q So is it fair to say, sir, then, that what you

1 did is you looked at individual patients and then compared
2 the data from the patients in one dataset to the other?
3 A Could you speak up? I didn't hear the first
4 part.
5 Q Yeah. Got it.
6 MR. PATTIS: Could we get longer gizmos
7 here?
8 Q Is it fair to say, sir, that you were looking at
9 patients who had reported to either a PCP or a
10 chiropractor and then were hospitalized, correct?
11 A Yes.
12 Q Okay and whatever took place in the physician's
13 and chiropractor's office, you relied on the self-report
14 of the physician or chiropractor for that data, correct?
15 A Yes.
16 Q You didn't have a chance to look at any of the
17 files of actual care for purposes of a clinical review of
18 what was done?
19 CHAIRMAN SCOTT: I think that was asked and
20 answered.
21 MR. PATTIS: Not by me.
22 MS. MOORE LEONHARDT: It was asked and
23 answered.
24 Q Did you have an opportunity to review any of the

1 clinical data?

2 A No. As I explained previously, when you have

3 access to data like this, there are laws in Ontario that

4 protect health data confidentiality, and one of the

5 ethical issues and legal issue, legislative issue is that

6 researchers get the data, but it's unidentified data.

7 Q Do you know how many claims were brought within

8 the Canadian courts from a person who visited a

9 chiropractor and then was hospitalized in an Ontario or

10 Canadian hospital for a stroke? Do you know how many?

11 MS. MOORE LEONHARDT: Objection. Beyond

12 Direct.

13 MR. PATTIS: There was no Direct.

14 MS. MOORE LEONHARDT: I believe there was

15 Direct.

16 MR. SHAPIRO: Can you repeat the question?

17 MR. PATTIS: Yes, sir.

18 Q Do you know how many claims within this database

19 involved persons who reported to a chiropractor for

20 ambulatory care were then hospitalized for a stroke? How

21 many of those claims involved people who went to court

22 claiming relief? Do you know how many of those?

23 A I have no idea.

24 Q Would you agree or disagree with the following

1 statement? "One of the most significant measures of the
2 incidence of injury in any health profession is the
3 malpractice record." Would you agree with that?
4 A No.
5 MS. MOORE LEONHARDT: Objection. Beyond
6 the scope of Direct.
7 Q Would you look at page two of the ICA's pre-
8 filed testimony, the testimony that you have adopted under
9 oath here? The first sentence on page two reads, "One of
10 the most significant measures of the incidence of injury
11 in any health profession is the malpractice record." What
12 does that mean, if you know?
13 A It means what it says.
14 Q But you disagree with the sworn testimony,
15 insofar as that comment is concerned?
16 A As an epidemiologist, I want to see actual
17 counts from unbiased databases, however, because there are
18 very few studies like that, some people would use the
19 number of lawsuits, which I don't agree is a good measure,
20 but it's one measure.
21 Q Are you testifying --
22 A I wouldn't draw an incidence rate from that
23 measure.
24 Q Are you testifying here, sir, that an interested

1 party is a source of reliable data?
2 A Sorry. Ask me again?
3 Q Are you testifying, sir, that an interested
4 party as a reliable source of data that that's objective
5 and neutral, a person reporting what went on in their
6 office, who might be subject to suit? That's reliable
7 data?
8 A Can you ask the question in a simple way, so I
9 can answer it?
10 Q I did.
11 A Please do it again.
12 Q You testified moments ago that you're not taken,
13 and that's a condensation, by malpractice or legal sorts
14 of data, that you're more interested in objective data,
15 correct?
16 A You know, I can't hear you, because you turn
17 away from the mike, and then I can't hear.
18 Q I'll be happy to repeat it as many times as it
19 takes. You're interested in the examination of objective
20 data, are you not?
21 A Yes, I am.
22 Q And, as an epidemiologist and trained
23 statistician, you are aware of the phenomena of observe or
24 bias, are you not?

1 A Yes.
2 Q Observe or bias is something that detracts from
3 the objectivity of a study, does it not?
4 A All bias does, yes.
5 Q And would you agree or disagree with the
6 following, that a person, who is subject to suit, subject
7 to being hailed into court and pursued for money damages
8 may or may not have an interest in the outcome of the data
9 that they report? Would you agree with that?
10 A That a person taking a lawsuit --
11 Q No. That a person, who is subject to being
12 sued, a provider, may or may not have an interest in the
13 outcome when they report data.
14 MS. MOORE LEONHARDT: Objection,
15 irrelevant.
16 MR. MALCYNSKY: I believe it's a proper
17 question. This witness hasn't even submitted pre-filed
18 testimony. We're allowing him to testify on a voluminous
19 study here, which has been the centerpiece of this entire
20 hearing for all practical purposes. I think a little
21 latitude is appropriate.
22 MS. MOORE LEONHARDT: The study that the
23 witness has been testifying about was pre-filed last
24 November.

1 MR. MALCYNSKY: And he's being asked about
2 the criteria and the --
3 MS. MOORE LEONHARDT: This question is not
4 about the study.
5 COURT REPORTER: One second.
6 MR. PATTIS: No, but it is about the pre-
7 filed testimony of the ICA, which this witness has
8 adopted.
9 MR. SHAPIRO: Counsel, it's my
10 understanding this witness is not clear about what you're
11 asking, so you might have to rephrase it.
12 MR. PATTIS: Okay. I'm going to break it
13 down in simple terms, so that there's no room for
14 misunderstanding.
15 Q In the ICA pre-filed testimony, there is a
16 sentence that reads, "One of the most significant measures
17 of the incidence of injury in any health profession is the
18 malpractice record." You've read that, correct, sir?
19 A Yes.
20 Q And a malpractice action, and I shouldn't assume
21 this, I mean you would agree with me that what a
22 malpractice action is is a claim, where a person contends
23 that someone has done something wrong, causing them harm,
24 fair enough?

1 A Right.
2 Q And that in a piece of litigation, you do
3 understand that a party can make a claim and the other
4 party can defend it, correct?
5 A Right.
6 Q And that they ask people who have no interest in
7 the outcome to make a decision about who is right, fair
8 enough?
9 A Right.
10 Q Have you ever known anyone who has been the
11 defendant in a malpractice action and been hailed into
12 court to account for their conduct?
13 MS. MOORE LEONHARDT: Objection,
14 irrelevant.
15 MR. SHAPIRO: I would recommend sustaining
16 the objection.
17 Q The point I'm trying to make --
18 MR. PATTIS: I'll assume it's sustained.
19 Q The point I'm trying to make, sir, is that with
20 the OHIP data, this study relied upon self-reporting from
21 persons who may or may not find themselves the target of a
22 malpractice record, correct?
23 A You know, I know what you're getting at, and I
24 can answer your question if you let me answer it.

1 Q Well I'd like you to answer it, and the question
2 was the following, sir.
3 MR. SHAPIRO: Counsel. Counsel. Counsel,
4 the witness is going to try to answer your question the
5 best he can. If you find it unresponsive, you can ask
6 another question.
7 MR. PATTIS: Thank you, sir.
8 A May I answer it? So he's raising the issue of
9 bias reporting, and if we go to Table Seven, which is on
10 S-181, it's the odds ratios and 95 percent confidence
11 intervals, etcetera, for a total number of chiropractic
12 and primary care physician visits, and we go to the left-
13 hand column, exposures, and if we just look at case
14 control estimates, we see any chiropractic visit, so there
15 has to be -- a chiropractor has to code an OHIP to receive
16 payment, so they're going to code.
17 Further down, we see "headache and cervical
18 visits," so those are codes that were specific for
19 headache and cervical. So if you follow your logic, that
20 there was observer bias, that observer bias would be
21 captured in any DC visit.
22 Q That's right.
23 A Right.
24 Q Yeah. That's my point, frankly.

1 A I don't agree that there was that type of bias.
2 Q But you don't know.
3 A Yeah, I don't know for sure.
4 Q And would you agree that not knowing means that,
5 not withstanding the work that you've done in this study,
6 that's yet an additional limitation on the validity?
7 A No, I don't think that is a limitation, because
8 we address that limitation by looking at any visit.
9 Q Okay. And in the study, you had not ruled out
10 neck manipulation as a potential cause of some VBA
11 strokes, correct?
12 A No.
13 Q That's not correct?
14 A No, it is correct.
15 Q Okay. And would you agree or disagree with the
16 following proposition, that there's no acceptable
17 screening procedure to identify patients with neck risk at
18 risk of VBA stroke?
19 A I agree with that.
20 Q There's a related issue in this hearing that is
21 analytically and conceptually distinct from the issue of
22 causation, and that is the notion of a discharge summary.
23 Would you agree or disagree -- not a discharge summary. A
24 discharge summary given to the patient. In other words,

1 what to look out for if you're having a stroke or whatnot.
2 Would you disagree or agree with the
3 following, that because there is no acceptable screening
4 procedure to identify patients with neck pain at risk of a
5 stroke, all health care providers should be required when
6 a person presents to them with head or neck or shoulder
7 pains to be given a warning after an ambulatory visit
8 about the signs of a stroke, so they can know to seek
9 care, if necessary?
10 A I don't think that's reasonable, no.
11 Q Okay. Not withstanding the fact that, according
12 to the Spine Study, there is a condition that people
13 report to both physicians and chiropractors that results
14 in a serendipitous stroke?
15 A Is that a question?
16 Q Yes. Do you not understand it?
17 A What is the question exactly?
18 Q Let's get to it. It is your belief that a small
19 group of patients reports to both the PCP and the DC
20 office with a medical condition that results in their
21 having a stroke, correct?
22 A That's one of the hypotheses that the study
23 raises, yes.
24 Q And a hypothesis, that's a scientific term or

1 jargon, meaning it’s something that bears further
2 analysis, correct?
3 A Yes.
4 Q The hypothesis is an attempt to account for the
5 unknowable, fair enough? An issue has arisen that bears
6 further inquiry?
7 A Sorry. I didn’t hear you.
8 Q An issue has arisen that bears further inquiry,
9 correct?
10 A Yes.
11 Q What do you think that condition is that people
12 report to the doctor with and the chiropractor with that
13 results in an ascertainable class of them having a stroke?
14 A Headache and neck pain.
15 Q And what do you think is the cause of that
16 headache and neck pain?
17 A Well --
18 Q Do you have any idea, or would that be utter
19 speculation?
20 A For an individual, it would be speculation.
21 Q Okay.
22 A But we know from studies that people with
23 dissections commonly present with headache and neck pain,
24 and that’s really what drove the design of this study.

1 Q And is that what led the ICA to refer to some
2 things as serendipitous adverse events?
3 A I don't know.
4 Q Would you take a look at page three of the ICA
5 testimony? And I'm looking at the third full paragraph.
6 "The issue of intent is highly relevant to the current
7 issue, as the remedy being sought bears no real
8 correlation to the incidence of even serendipitous adverse
9 events."
10 I always thought of serendipity as a happy
11 circumstance. I find a lottery ticket, and it's the
12 winner. I just have a hard time conceptualizing stroke as
13 serendipity.
14 A Can you ask the question again?
15 Q Do you know what they're talking about? What is
16 this serendipitous adverse event in the pre-filed
17 testimony? What are these?
18 A I think what they're getting at is that people,
19 who are already in the prodrome of vertebrobasilar artery
20 stroke, can present to chiropractors and go on to have
21 that stroke anyway.
22 Q Okay and that's precisely the hypothesis that
23 your study led you to reach, correct?
24 A Right.

1 Q Now do you agree or disagree with the following?
2 Because spinal manipulative therapy is a medical
3 procedure, it seems that practitioners should obtain
4 consent from patients for the possibility that neck
5 manipulation can cause stroke or TIA. Do you agree with
6 that?
7 A Can you read it slower, so I can --
8 Q I can.
9 A Or can you give me the source, so I can read it,
10 too?
11 Q Do you agree or disagree with the following,
12 that because spinal manipulative therapy is a medical
13 procedure, it seems that practitioners should obtain
14 consent from patients for the possibility that neck
15 manipulation can cause stroke or TIA?
16 DR. POWERS: What is the source of this?
17 MR. PATTIS: I'd like the witness to answer
18 the question first, and then I'll be happy to tell
19 everybody what the source is.
20 DR. POWERS: I was just kind of curious.
21 MR. PATTIS: And I'll satisfy your
22 curiosity, but, as I say to my wife, I can do it all. I
23 just can't do it all at once.
24 Q Do you disagree or agree with that statement,

1 sir?
2 A I disagree with that statement.
3 Q Okay. That is a statement that comes from the
4 Spinal Manipulative Therapy is an Independent Risk Factor
5 for Vertebral Artery Dissection, the Smith Study. You're
6 familiar with that, the Smith Study?
7 A Smith Study, right.
8 Q The one cited at footnote 24 of the Spine of
9 yours.
10 A Right.
11 Q That is a report -- you disagree with Smith on
12 that issue, correct?
13 A I'd have to look at what issue, specifically,
14 you're taking from this Smith Study, so I understand what
15 you're asking.
16 MR. PATTIS: May I approach the witness,
17 please?
18 MR. SHAPIRO: Yes.
19 A I have the Smith Study here, so you can just
20 tell me.
21 Q And just for the sake of the record, the Smith
22 Study is referred to at footnote 25 of your report, is it
23 not? It appeared in the journal Neurology?
24 DR. POWERS: Attorney Pattis? Attorney

1 Pattis?
2 MR. PATTIS: Yes?
3 DR. POWERS: Is that study in the pre-filed
4 testimony?
5 MR. PATTIS: No. It's in a footnote to his
6 study.
7 DR. POWERS: No. I just didn't know if
8 there was something I could look at, but someone is going
9 to hand me a copy.
10 MR. PATTIS: Okay.
11 MS. MOORE LEONHARDT: We have no objection
12 to him pursuing this line of question.
13 MR. PATTIS: Well that's a welcome relief.
14 DR. IMOSSI: Excuse me. I have copies of
15 the Smith Study, as well as the Rothwell Study that's been
16 brought up several times. At this time, maybe we can
17 enter both of them into exhibits.
18 MR. PATTIS: No objection.
19 DR. IMOSSI: Since not all the examiners
20 have it.
21 MS. MOORE LEONHARDT: No objection.
22 MR. SHAPIRO: I'm going to pass these out
23 to counsel and just make sure that we're all on the same
24 page, in terms of what the document --

1 Is there any objection from counsel to this
2 document being admitted as Exhibit 70?
3 MR. MALCYNSKY: No objection.
4 MR. SHAPIRO: Attorney Pattis?
5 MR. PATTIS: Yes?
6 MR. SHAPIRO: Is there any objection?
7 MR. PATTIS: No, none.
8 MR. SHAPIRO: Attorney Moore Leonhardt?
9 MS. MOORE LEONHARDT: No objection.
10 (Whereupon, the above-mentioned document
11 was marked as Exhibit No. 70.)
12 Q Are we on the same -- with me, that's a
13 dangerous question. Do you have the study there, sir?
14 A Yes, I do.
15 MR. SHAPIRO: Counsel, I'm just going to
16 admit the Rothwell Study, as well, while we're admitting
17 documents.
18 MR. PATTIS: No objection.
19 MR. SHAPIRO: Let me provide copies.
20 Attorney Malcynsky, any objection to this document?
21 MR. MALCYNSKY: No objection.
22 MR. SHAPIRO: Attorney Pattis?
23 MR. PATTIS: None.
24 MR. SHAPIRO: Attorney Moore Leonhardt,

1 when you return, is there any objection to this document?
2 MS. MOORE LEONHARDT: No objection.
3 MR. SHAPIRO: Okay. This Rothwell Study
4 will be admitted as Exhibit 71.
5 (Whereupon, the above-mentioned document
6 was marked as Exhibit No. 71.)
7 MR. PATTIS: May I proceed?
8 MR. SHAPIRO: You may proceed.
9 MR. PATTIS: Thank you.
10 Q I'm looking at page -- of course, now I've got
11 to make sure we're all on the same edition of it. I'm
12 looking at the Smith Study, page 1427. Are you there,
13 sir?
14 A Yes.
15 Q Among the assertions made in that study, and I'm
16 looking at the type at the lower portion of the left-hand
17 column, "Referring to a prior study from this case report
18 and our study, it appears that spinal manipulation therapy
19 may exacerbate preexisting dissections, produce immediate
20 or delayed embolization. It is important, then, to avoid
21 SMT in patients with spontaneous dissections." You would
22 agree with that, correct?
23 A Can you -- I'd like to read along, so I know
24 exactly what I'm agreeing to, so if you can give me the --

1 Q I'll do it again, sir. At the very bottom of
2 the left-hand column on page 1427, there is a sentence
3 that begins, "From this case report and our study." Do
4 you see that?
5 A Give me a minute to find it. It's in the lower
6 paragraph?
7 Q The left-hand column at the very bottom. "From
8 this case report and our study."
9 A Right.
10 Q "It appears that SMT," spinal manipulation
11 therapy, "may exacerbate preexisting dissections, produce
12 immediate or delayed embolization. It is important, then,
13 to avoid SMT in patients with spontaneous dissections."
14 You would agree with that, would you not?
15 A No, I don't. I have to think about it, so give
16 me a moment. First of all, I have to say that I don't
17 agree with this study. I don't think it's a well done
18 study, so there are major methodologic limitations with
19 the study, so I have a very hard time agreeing with the
20 conclusions from the study when I think the study is not
21 well done.
22 Q This study appeared in the journal Neurology?
23 A Yes.
24 Q A peer reviewed study?

1 A Yes.
2 Q Much as the same that Spine is a peer reviewed
3 journal, is it not?
4 A Yes.
5 Q And are you aware that -- is it not the custom,
6 sir, with respect to these studies to have them appear in
7 on-line versions of the journal, as well?
8 A Yes.
9 Q And, thus, a practitioner can download a study
10 to determine whether it is current as of a particular
11 date. In other words, whether the authors wish to change
12 their conclusions, correct?
13 A That was a long question.
14 Q Was it?
15 A Yeah.
16 Q Are you aware, sir, of whether there are on-line
17 -- whether one can access these studies on line?
18 A Yes.
19 Q Are you aware of whether --
20 A If you, for example, you need a subscription to
21 the journal often to do that.
22 Q Are you aware of whether Neurology can be
23 accessed on line?
24 A Well I can access it through my university

1 hospital. I don't know if everyone else can.
2 Q Didn't ask you that.
3 A You didn't?
4 Q No. Are you aware of whether Neurology can be
5 accessed on line, and your answer is, yes, if you can
6 access it, so that's a yes?
7 A I can access it, yes.
8 Q Okay and is it not common that when accessing
9 these data, these articles on line, the publishers provide
10 information about the date as of which the information is
11 current? Is that not common?
12 A I don't know what you're asking. The date that
13 it's current?
14 Q Yes.
15 A There's a publication date on the study.
16 Q That's something different.
17 A What are you asking?
18 Q The Smith Study was published in 2003, correct?
19 A Correct.
20 Q Are you aware, sir, of whether, when Neurology
21 put it on line, they put a notation on it about the date
22 to which the data or the study is current?
23 A No. I don't know what you're talking about.
24 MR. PATTIS: May I approach the witness,

1 please?

2 MR. SHAPIRO: What's the purpose of this

3 line of questioning, counsel?

4 MR. PATTIS: We have a downloaded copy of

5 this study from neurology.org, downloaded on August 5,

6 2008, that contains -- this information is current as of

7 August 5, 2008, the same year in which the Spine Study was

8 published.

9 DR. POWERS: Can we see this?

10 MR. PATTIS: Yes.

11 MS. MOORE LEONHARDT: I'd like to object to

12 the question, because the witness has already answered it.

13 He's unaware of it, and the question has been asked and

14 answered.

15 DR. POWERS: Dan? I don't think there's a

16 problem with him answering this. I'd like to see what --

17 you know, obviously, his CV is very strong in research,

18 and I'd like to see if there is a reason that that

19 statement is there, just as the attorney would.

20 MR. PATTIS: May I approach?

21 MR. SHAPIRO: Yes.

22 MS. MOORE LEONHARDT: May I have a copy?

23 MR. PATTIS: No, but I'll let you look at

24 mine. I won't even charge you for it.

1 MS. MOORE LEONHARDT: Thank you. I've just
2 taken off a page that is containing information that's far
3 beyond what counsel was describing and ask that the
4 witness only be required to look at the original document
5 that counsel showed Attorney Shapiro.
6 COURT REPORTER: I can't hear you.
7 MR. PATTIS: That's not even an objection,
8 because --
9 MR. SHAPIRO: Okay. If you could just show
10 him the document and ask him the question?
11 Q Sir, contrary to counsel's fears, I only wanted
12 to ask you about what's on the first page here. I don't
13 know what that means. This purports to be a document
14 downloaded from neurology.org in August of 2008.
15 MS. MOORE LEONHARDT: Objection to form.
16 He should ask the witness if he knows what it is, and the
17 witness can answer a question, such as that. For counsel
18 to tell the witness what the document is is inappropriate.
19 Q And it contains the following. "This
20 information is current, as of August 5, 2008." Do you
21 have any idea what that means?
22 A No, I don't.
23 Q Okay.
24 CHAIRMAN SCOTT: Shall we move on?

1 Q Are you engaged now, sir, in a further study to
2 explore your hypothesis about a preexisting condition
3 being the source of strokes that patients may have
4 subsequent to ambulatory care in a physician or
5 chiropractic office?
6 A Am I engaged in another study?
7 Q Yeah.
8 A Yes.
9 Q Okay and when do you expect that to be
10 published?
11 A I don't know yet.
12 MR. PATTIS: Okay. Nothing further.
13 MR. SHAPIRO: Attorney Moore Leonhardt, do
14 you have any?
15 MS. MOORE LEONHARDT: Thank you. Just a
16 few brief questions.
17
18 REDIRECT EXAMINATION
19 BY MS. MOORE LEONHARDT:
20 Q Dr. Cassidy, it's been a long morning, and I
21 thank you for indulging in this lengthy Cross-Examination.
22 You mentioned the Smith methodology had problems in your
23 view. Would you please explain to the Board what you felt
24 were the major methodological problems with the Smith

1 Study?

2 A We detailed those in a letter to the editor,

3 which I could give the Board, so that they would have a

4 written record of that, and we published that in Neurology

5 on November 1, 2003, and I could read that letter, or just

6 briefly tell you what we said in the letter, and you can

7 have the letter.

8 CHAIRMAN SCOTT: Could you just briefly

9 tell us about it?

10 THE WITNESS: Yes.

11 CHAIRMAN SCOTT: Thank you.

12 A So we were concerned about the selection of

13 controls in this study. One of the principles of doing a

14 valid case control study is to make sure you sample cases

15 and controls from the same population.

16 If you're sampling them from different

17 populations, they could differ on confounding factors that

18 could explain the association. So, for example, on our

19 study, we sampled strokes and exposures from the Ontario

20 population.

21 What Smith, et al, did is they selected

22 their controls from a stroke, academic stroke database,

23 and their controls were people with other strokes, and

24 those people with other strokes are quite different than

1 people with strokes coming from a vertebral artery
2 dissection.
3 And we already know, from studying
4 chiropractic utilization, that people who have back and
5 neck problems can seek chiropractic care or physician care
6 if they have a lot of co-morbid health conditions, such as
7 diabetes, hypertension. They will tend to see their
8 physician, rather than their chiropractor.
9 So if you select as a control group a group
10 of people that have other strokes and more co-morbid
11 illness, they're less likely to see a chiropractor, which
12 could bias the comparison between that control group,
13 because they're artificially already seeing fewer
14 chiropractors, and the other group, which was the so-
15 called dissection group, and that's a form of selection
16 bias that happens in case control studies, where, again,
17 you don't collect cases and controls from the same
18 database.
19 Secondly, the second concern we have about,
20 and we write this in the letter, about using academic
21 stroke databases, is that -- and I work at a university
22 hospital. University hospitals tend to have referred on
23 to them the more controversial and more serious stroke
24 cases, and there's general knowledge amongst neurologists,

1 for example, of the potential of chiropractors causing
2 stroke, so they will carefully ask people about whether
3 they've seen a chiropractor before.
4 They won't necessarily carefully ask people
5 whether they saw a family doctor the day before their
6 stroke. So that information can get collected into these
7 databases, and that's another form of selection bias,
8 where these sort of cases end up in academic stroke
9 databases, and this is common knowledge, that these are
10 very select databases, and it creates problems for the
11 selection of cases, and it also creates a problem for
12 recall bias, because if you have one of these strokes and
13 you go to an academic center and they start questioning
14 you did you see a chiropractor a week before your stroke,
15 that type of information will go into the chart, and then
16 it gets labeled as a chiropractic stroke.
17 The other problem with this study is they
18 went back and asked people about that, so if people were
19 with the vertebrobasilar strokes from the dissections were
20 more carefully asked about this exposure, they would be
21 more likely to remember that exposure when asked by the
22 researcher, so it's another type of bias.
23 In our study, we didn't ask anybody
24 anything. We looked at actual visit records and stroke

1 discharges, and that is written. I don't know if you have
2 a copy of that, but it's something you should look at.
3 Another concern that this paper was also
4 reviewed and this document, which is The Decade of the
5 Bone and Joint Task Force, where the study, our study was
6 published, and what The Decade of the Bone and Joint Task
7 Force did was a systematic review of all evidence around
8 benefit and risks surround all treatments for neck pain
9 and its associated conditions, so stroke was one issue
10 that came up, and the reason we did our study is because
11 this task force identified stroke as an issue, and we
12 thought we could extend the Rothwell Study by adding
13 physician exposure.
14 We also reviewed, and not just me, this was
15 the whole group on this task force, reviewed past studies
16 of risk associated with chiropractic care. This was one
17 of the studies that was reviewed. Rothwell was another
18 study. This study was rejected by the larger task force,
19 because of the methodologic issues that I just mentioned.
20 Q Thank you. And then, lastly, a couple other
21 questions. You just mentioned the Rothwell Study, and I
22 understand that your more recent study took what the
23 Rothwell research group was working on one step further
24 and built upon where Rothwell left off. Is that fair to

1 say?

2 A Yes.

3 Q And would you please explain to the Board how
4 the two studies relate to one another?

5 A Well the Rothwell Study used the same databases
6 that we used, and they collected CIHI strokes, or hospital
7 discharge strokes over a six-year period. When we
8 repeated the study, we did it over a nine-year period, so
9 we had more cases and more person time at risk to do the
10 study. We did a couple of nuances, because we were aware
11 of this issue, that dissection can cause headache and neck
12 pain and that people with dissection related headache and
13 neck pain may present to chiropractors or family
14 physicians.

15 So we repeated the Rothwell methodology,
16 but added a couple of twists. The first is that we also
17 looked at physician, family physician ambulatory visits
18 and generated those odds ratios to compare to the
19 chiropractic.

20 The second is that we used -- we did the
21 case control study, the same methodology they did, but
22 then we also did what's called a case crossover study,
23 where cases act as their own controls, and this controls
24 for other stroke risk factors, so it's better designed to

1 control for confounding. The results were very similar to
2 the case control study, so that was reassuring.
3 The third thing we did is that we also
4 looked at visits that were headache and neck pain related,
5 and, in both the physician odds ratios and the
6 chiropractic odds, chiropractors' odds ratios, they both
7 went up when we saw that the visit was related to headache
8 and neck pain, so that, to us, raises this issue of
9 confounding by indication, where people already have the
10 condition and they're presenting to the practitioner with
11 that condition.
12 And Susan Bondy, who was the supervisor of
13 Dianna Rothwell, is also a co-author of our study, and
14 she's a colleague of mine at the University of Toronto.
15 MR. SHAPIRO: Counsel, I don't think your
16 mike is on.
17 Q Taking you back to the beginning of your
18 testimony, when Attorney Malcynsky was questioning you
19 under Cross-Examination, I believe you were referring to
20 Table Seven, and there may have been some confusion, as to
21 what your answer was to one of the questions that he put
22 to you with regard to the statistical significance of 1.3
23 times. Do you recall that, and whether it indicated risk
24 or association?

1 A Right.
2 Q Yes. Would you clarify what your testimony was
3 in that regard, please?
4 A The odds ratio of 1.37, with a competence
5 interval that does not cross one, indicates an association
6 of 37 percent.
7 Q Okay, so, it was not your intent to agree that
8 there was any indication of risk with regard to that table
9 or anything that's presented, was it?
10 A Well we look at associations to inform our
11 causal reasoning around risk, so these are associations in
12 the table. The next step is to take those associations
13 and do causal reasoning around it, and we outline that in
14 the discussion of the paper.
15 Q Right, and my point was that the Table Seven is
16 referring to the association and not the risk pattern.
17 A It's referring to the association, yes.
18 MS. MOORE LEONHARDT: Thank you. I don't
19 have any further questions.
20 MR. SHAPIRO: Attorney Malcynsky?
21 MR. MALCYNSKY: Just a couple of brief
22 follow-ups.
23
24 RECROSS-EXAMINATION

1 BY MR. MALCYNSKY:
2 Q Dr. Cassidy, I believe you identified yourself
3 as either currently or at one point in your career been a
4 practicing chiropractor?
5 A Yes.
6 Q Has anyone ever suffered a stroke after you
7 performed a cervical neck manipulation on that patient?
8 A Yes.
9 Q And --
10 A And I wrote that case up.
11 Q And do you believe that the manipulation might
12 have been a possible cause of the stroke?
13 A I did at the time, but I don’t now.
14 Q Okay and because of your study?
15 A Because of the study, yes.
16 Q Okay, but your study does conclude, quote, “We
17 have not ruled out neck manipulation as a potential cause
18 of VBA strokes.”
19 A We have not, but if one was to accept that, one
20 would then have to say that physicians are causing these
21 strokes, too, and I don’t think they are.
22 Q You also say, quote, “Our results should be
23 interpreted cautiously and placed into clinical
24 perspective.”

1 A Yes.
2 Q That precedes the sentence about not ruling out
3 neck manipulation as a cause of stroke. Can you explain
4 what you mean by that?
5 A Yes.
6 Q The clinical perspective part of it?
7 A "Our results should be interpreted cautiously
8 and placed into clinical perspective." I think what we
9 mean by that is that this is a study that raises real
10 doubt about the association being a risk, but there may be
11 some day a better study, and I would change my mind if I
12 saw a better study.
13 Q And it's possible that that could happen, isn't
14 it?
15 A It is possible.
16 MR. MALCYNSKY: Thank you.
17 MR. PATTIS: No further questions.
18 MR. SHAPIRO: Any questions from the Board?
19 MS. REXFORD: Yes, I have one.
20 EXAMINATION BY MS. REXFORD:
21 Q Good morning, almost afternoon. I'm very
22 interested in gender issues, and could you tell me the
23 breakdown in your study of men/women? The only statistic
24 I saw was a 63 percent men.

1 A Yes. Table One.
2 Q The thing that worried me about that statistic
3 was that women experience stroke at a greater rate than
4 men do, so I didn't know if you thought that might have
5 skewed the outcomes to have studied more men than women.
6 A No, because we collected all strokes that
7 occurred in the Ontario population with all
8 vertebrobasilar artery coded discharge strokes, so that's
9 the result.
10 Q Do you think because women have a higher
11 incidence of stroke that perhaps there should be greater
12 precautions in talking to them?
13 A No, because I don't agree with your statement,
14 that women have higher incidence of stroke. It depends on
15 the type of stroke, so, for example, and I have with me
16 what I think and I cited in the paper the only good study
17 on the incidence of vertebral artery dissection related
18 stroke, and that's a paper published out of the Mayo
19 Clinic.
20 In Table Two of that study, where they look
21 at vertebral artery dissections, 67 percent of those
22 dissections were in males, so I think it depends on the
23 type of stroke you're looking at. So if you look at other
24 types of strokes, it may be that women are more -- it

1 occurs more commonly in women.
2 To tell you the truth, I don't think we
3 have really good -- we don't have a lot of studies, and we
4 don't have -- the only good study is this study that I'm
5 aware of.
6 Q So often, at least in the United States, it was
7 assumed that whatever they found with men was relevant to
8 women, and, of course, that's been shown not to be true.
9 A I'm sorry. I didn't hear you.
10 Q In the United States, for years we studied men,
11 and we assumed that the findings were also relevant to
12 women, and it has been shown not to be true.
13 A I agree. I think gender studies have moved that
14 issue forward, yes.
15 MS. REXFORD: Thank you.
16 EXAMINATION BY DR. IMOSSI:
17 Q Hi, Mr. Cassidy. I have just one question on
18 the Smith Study. The Smith Study, out of the three that
19 we've been talking about, is the only one that actually
20 supposedly addresses spinal manipulation as an independent
21 risk factor specifically for vertebral artery dissection,
22 which I know has been a point of contention that the other
23 two studies, Rothwell and your own, concentrated on
24 vertebrobasilar stroke, but what I find interesting, if

1 they're looking for this as an independent risk factor,
2 vertebrobasilar dissection, would you know why they would
3 exclude vertebral artery dissection from the case studies?
4 If you go down to the results section, when
5 they were picking their candidates and they deselected
6 some of the people, they said 37 patients were excluded
7 after record review. Ten of them had arterial dissections
8 without a stroke, so that I found a big question. That
9 brought the number down a lot, and, again, they were
10 supposed to be looking for vertebral artery dissections.
11 Do you have any idea why they would take out that
12 population?
13 A That second part of your question I don't quite
14 follow, because you'd have to point to the part of the
15 study, but I do want to address one thing that you raised.
16 This study isn't just a study of dissection. It's a
17 study of strokes.
18 Q Right.
19 A Those dissections would not come to medical
20 attention, unless they resulted in a stroke, so that if
21 you look at Table One of that study and you look at the
22 percentage of dissections that had stroke, it's 90
23 percent, and then there's an additional 10 percent that
24 had a transient ischemic attack, and that would be a

1 pretty significant TIA to end up in a hospital and in the
2 stroke database.
3 So these are not cases of dissection
4 without stroke. They got into the stroke database,
5 because they had a stroke or a TIA.
6 Q All right and one other comment I found, which I
7 don't think you mentioned. With the selection bias, they
8 also deselected iatrogenic dissection. That was eight
9 cases there. Do you think that might have had any effect
10 on the conclusions?
11 A Could you tell me where you're --
12 Q The results section.
13 A Yes. I have that. What paragraph?
14 Q Right in the middle.
15 A The first paragraph?
16 Q Yeah. The middle of the first paragraph, where
17 it talks about 37 patients were excluded. "Iatrogenic
18 dissection with or without stroke, n equals 8," which
19 ended up being higher than the number of cases that they
20 attributed to spinal manipulation was only seven. The
21 number that was attributed to medical intervention was
22 eight, but they excluded that from the study. I found
23 that interesting, and I wondered if you had any comment on
24 that.

1 A No. So that could be dissection related to
2 having an operation to the neck or something like that,
3 but I don't know for sure. I will point out, though, that
4 this study only includes 25 vertebral dissections, so it's
5 a very small study.
6 Q And one other comment on the Smith Study.
7 Again, it's been brought up that this was the study that
8 showed that spinal manipulation proved -- the study proved
9 that spinal manipulation was an independent risk factor
10 for vertebral artery dissection, but according to what I
11 could make of the study, they're basing that on -- it
12 appears that there's one case out of the seven spinal
13 manipulative therapy cases that the person did not have
14 neck pain before they had their stroke, so am I right in
15 assuming that's the reason why they came to the
16 conclusion, based on this one case, that one out of the
17 seven did not have neck pain of the people that had gone
18 to a chiropractor within the last 30 days?
19 Since one out of seven did not have neck
20 pain, that showed that these vertebral artery dissections
21 that were associated with chiropractic were not -- were
22 independent to any other risk factors, like neck pain?
23 A Boy, that's a long question.
24 Q I know. Sorry.

1 A I don't follow your question. I'm sorry.
2 DR. IMOSSI: Okay.
3 MR. SHAPIRO: Any other questions?
4 EXAMINATION BY DR. POWERS:
5 Q Good morning. We're getting very close to
6 lunchtime here, so I don't want to wear you down. I just
7 have a few clarification points that I wanted to ask you.
8 First of all, I've been taking notes on the previous three
9 days of testimony, and there's a few things that I'd like
10 your comments on that were brought up, and they may have
11 been addressed today, but sometimes they got a little
12 convoluted, and I just wanted to get a specific answer on
13 a couple.
14 First of all, and I don't know if you can
15 answer this, but I'm going to ask, in terms of neck pain
16 and headache, it's obviously a very common presenting
17 symptom to chiropractors' offices, medical physicians'
18 offices, osteopathic offices.
19 Relative to that, is there a known
20 percentage of how many of these people will have a stroke?
21 I know it's broad, but I mean is this a very --
22 vertebrobasilar stroke we're talking in particular here.
23 This is a very, very small subset, correct?
24 A Yes.

1 Q How small are we talking?

2 A I don't know.

3 Q Okay. There's been a comment in prior testimony
4 and in some of the pre-filed testimony, and I'm going to
5 read one of them. It says -- they talked about your
6 study, and they talked about chiropractors referencing
7 this study, and it said, "These arguments further ignore
8 the large body of evidence collected in over 70 years of
9 case reports and additional scientific literature."

10 Now we did touch on Rothwell and Smith
11 here, but, in a broad sense, is it your opinion that your
12 study from 2008 essentially does wipe out all previous
13 studies?

14 A It extends the finding of the Rothwell Study, so
15 I wouldn't say it wipes out all previous studies. Again,
16 and I talked about this earlier, if you want to look at
17 causation, you have to have an analytic study, so you need
18 a control group.

19 So all of the other studies that are
20 published most of them are just case reports. There's no
21 control group, so you can't really calculate a risk from a
22 case report. They certainly raise the potential, and it's
23 proper to go forward and do analytic studies, so there
24 have only been a couple of analytic studies.

1 We talked about the Smith Study. I think
2 it's biased for the reasons that I mentioned earlier, and
3 you can read more in our letter to the editor.
4 The Rothwell Study shows an association.
5 Our study showed the same association, but extended that
6 study by showing the same association with family
7 physician visits, so that's how our study extended, so I
8 don't think it -- it doesn't wipe out all the studies. It
9 extends our knowledge.
10 So when I think about any health issue, I
11 try and take into account the past studies, so I would
12 review the literature. I would then triage them into case
13 reports, which raise hypotheses, and then analytic
14 studies, which I would look at very carefully, because the
15 analytic studies, if they're not done properly, may give
16 you biased results.
17 But the case reports, you can't use that as
18 causation, especially in an issue like this, where there
19 are issues around confounding by indication, people
20 presenting in the prodrome of a stroke, and when it's such
21 a rare event.
22 COURT REPORTER: One moment.
23 A Sorry for my longwinded answer on that.
24 Q All set? Okay, so, we heard testimony from some

1 people, who have alleged that their -- not alleged. I
2 apologize for saying that. I don't want to be
3 insensitive. I'm just trying to ask this correctly.
4 We heard testimony from people that stated
5 they had a chiropractic adjustment, or a loved one, and
6 they stroked right on the table, or very shortly
7 thereafter. There was I think one that talked about three
8 weeks, but I'm more interested in just focusing on the one
9 that's right away, because it seems such as one would look
10 at it a cause and effect.
11 So, basically, what the results of your
12 study are saying and in your opinion is that they had a
13 dissection, and they were going to have a stroke whether
14 they went to the chiropractor that day, or went to the
15 hair salon and put their head back, or whatever mitigating
16 factor might be?
17 A Yes. That's one interpretation. There's
18 another interpretation, though, and I want to be clear
19 about this, too. It is also possible, and I mentioned
20 this earlier under questioning, that both chiropractors
21 and family physicians are causing stroke.
22 That is possible. I can't rule that out,
23 so, for example, maybe people who are in the prodrome of a
24 stroke see a family physician, and he asks them to move

1 their neck like this and back and forth, and that causes a
2 stroke. I don't know for sure, but I think that's
3 unlikely, and I think that the data, the analyses that we
4 do, suggests more strongly that this is confounding by
5 indication.
6 In other words, these people are presenting
7 with the condition, and it's going to happen anyway, but
8 there is that other -- as we see in the paper, we can't
9 rule out causation, too, but, in order to accept that,
10 we'd have to also accept that the physicians are also
11 causing it.
12 Q Another thing that's been brought up and I've
13 heard more than three or four times is the issue of under
14 reporting. Some people have stated, or some testimony has
15 come in that said, you know, these studies are great, but
16 it's under reported.
17 Can you make any comment on that? As an
18 epidemiologist, I thought maybe you might be able to clear
19 that up better for me, because I'm sure, with anything, it
20 could be considered under reported, but certainly
21 something that happens in surgery at a hospital tends not
22 to be under reported. It occurred right there.
23 Any comment on stroke and under reporting
24 related to manipulation?

1 A Well I don't know of any good studies that
2 actually provide an incidence for that, so I can't comment
3 on whether it's under reported or over reported.
4 DR. POWERS: I had a couple others, but
5 Attorney Malcynsky actually asked them, so that covers
6 everything I had. I appreciate your time and coming down
7 today to testify.
8 MR. SHAPIRO: Anything further?
9 DR. IMOSSI: Yes. I'm going to have
10 another shot at this. I have a couple of questions about
11 your own study, Dr. Cassidy.
12 EXAMINATION BY DR. IMOSSI:
13 Q The study mentions that this case covers 109
14 million patient years. Exactly how many patients were
15 involved in the study? I know it's the Providence of
16 Ontario. I couldn't find an exact number on that. Did
17 you have any idea, because I would think the larger the
18 population base the more valid the study.
19 A Right. I think we give a figure. Basically, we
20 studied the Ontario population over nine years, so that's
21 109 million person years of observation.
22 Q Okay. All right and there's been criticisms
23 that the vertebral artery dissection incidents wasn't
24 measured in the study, but your answer was that that's

1 just a hard thing to evaluate without a stroke?
2 A All the studies address this. People get into
3 those studies, because they have a stroke, then it's
4 investigated, whether they have a dissection or not.
5 Q All right.
6 A Otherwise, the dissection doesn't come to
7 medical attention.
8 Q Right.
9 A So they have to have a stroke, or a TIA, or some
10 neurological event that would bring them to a hospital,
11 where someone would clue in and investigate them.
12 Q Right. And you're probably one of the leading
13 authorities in the world on this subject. I'm wondering,
14 in your opinion, are there any numbers out there, as to
15 how many of these vertebral artery dissections proceed
16 into a stroke? Is there any kind of incident rating,
17 where we can use that number to extrapolate?
18 A No. There are no studies that give an incidence
19 rate for vertebral artery dissection.
20 Q So you wouldn't even be able to guesstimate?
21 A And the reason is you can't detect them.
22 Q Right.
23 A Because many of them would go undetected.
24 Q Which brings up a good point. If these could be

1 detected, based on their prodrome, I mean our highest
2 priority here is to protect and promote the public health,
3 if all doctors, all physicians, chiropractic and medical,
4 could pick up on these prodromes, would that change the
5 outcomes?
6 Before there was actually a stroke, there
7 is a way of diagnosing it, isn't that correct?
8 A Yes, and that would be good if that's possible,
9 but I think that's unlikely for two reasons. The first is
10 it's such a rare event, and the second is that there's no
11 test that anyone could do in their clinic to pick it up.
12 They'd have to be referred to a tertiary care hospital
13 that would have the technology available to image the
14 vertebral arteries.
15 Q And you need insurance approval for that, the
16 cooperation of the insurance world, I'm sure, because it
17 would take a high degree of suspicion and maybe not a lot
18 of clinical findings, because these cases do not appear
19 emergent until the stroke.
20 A Well given that, you know, a high percentage of
21 the population has headache and neck pain, the cost would
22 be astronomical.
23 Q All right. Do you feel from your research that
24 there might be any genetic or environmental factors

1 playing a role in the cervical artery dissections?
2 A Not directly from my own research, but there are
3 systematic reviews on that that do look at other causes
4 for vertebrobasilar stroke.
5 Q Okay.
6 A There is a very good study published on that by
7 Sidney Rubenstein, and, if you're interested, you should
8 look at that study.
9 Q Okay. Then, to follow-up on the suggestion of
10 observer bias, where the doctors could have been changing
11 their coding, knowing that they were being watched, I mean
12 doctors they submitted their coding for billing purposes,
13 were they aware that this was going to be a study?
14 A No.
15 Q Generally, I don't know how it's done in Canada,
16 I mean, in most offices, we're sending in our data
17 electronically just about every day to the companies. Is
18 that the way it's done in Canada?
19 A Well I don't practice anymore, so I don't know
20 how it's done in Ontario. I believe it's similar to that.
21 Q Because my thoughts, and let me know if you --
22 what?
23 A I can't really answer that question.
24 Q Okay.

1 A Because I don't practice in Ontario.
2 Q Because my thoughts, let me know if you agree --
3 A Actually, I do know that there are software
4 companies that chiropractors purchase their software for
5 billing purposes, and they download the billing codes.
6 That's all I know.
7 Q Okay. My thoughts were that the doctors would
8 almost have to be seeing the future, as to which patients
9 were going to be having strokes to be changing their
10 billing, especially when --
11 MR. PATTIS: Are you testifying, and, so,
12 do I get to Cross-Examine you?
13 DR. IMOSSI: I'm asking if he agrees with
14 me.
15 MR. PATTIS: Well, I mean, that's
16 essentially speculative. I mean would you agree or
17 disagree that if you thought you were going to get caught
18 at something, you might try to hide your tracks?
19 MR. SHAPIRO: Counsel, please allow the
20 Board member to ask the question. The witness can answer
21 as he sees fit.
22 MR. PATTIS: The problem is they're not
23 questions.
24 MR. SHAPIRO: She was asking, just as you

1 did, whether he agrees with a certain statement, and she
2 made that statement.
3 MR. PATTIS: Objection, speculative.
4 MR. SHAPIRO: I would recommend the
5 objection be overruled.
6 MS. MOORE LEONHARDT: I think it's proper
7 Cross -- I'm sorry. It's proper Cross-Examination to
8 lead.
9 MR. SHAPIRO: I would recommend the
10 objection be overruled.
11 A I guess the bottom line is I don't believe that
12 that's an issue, because even if it was, we still captured
13 all visits, and we had that discussion earlier when we
14 looked at the way we did our analysis in Table Seven.
15 Q All right and just a last easy question about
16 prospective research. I mean there hasn't been any done.
17 It looks like that's a big problem, and a lot of the
18 studies have made innuendoes that that would be a great
19 idea for the future. Is that possible? Do you plan on
20 it? Do you know if there's any studies like that in the
21 works?
22 A I don't know if there are any studies being
23 planned to do a prospective study. A lot of adverse event
24 studies use retrospective data when they're rare events.

1 To do a prospective cohort study of over 100 million
2 person years' exposure would be an enormous undertaking,
3 and that's why we use these types of databases.
4 DR. IMOSSI: All right. Thank you, Dr.
5 Cassidy.
6 MR. SHAPIRO: Any other questions?
7 EXAMINATION BY DR. SEAN ROBOTHAM:
8 Q Doctor, I just have one question. You were cut
9 off earlier today in regards to the clinicians that made
10 up your group that came up with the hypotheses. Could you
11 give me the disciplines for those clinicians?
12 A If you have a copy of this, I saw that being
13 handed out, if you go to this page, it's a couple of pages
14 in, and, from there on, you can see a list of all the
15 people that were involved.
16 The first is a chiropractor, MD,
17 neurologist, Ph.D., neuroscientist. The second is a
18 dentist, medical doctor, epidemiologist. Then there was a
19 vice president, who was administrative.
20 The next is a psychologist epidemiologist.
21 The next is myself. Then there's an orthopedic surgeon
22 from Stanford. Then there's a chiropractor,
23 epidemiologist. Then there's a library scientist. Then
24 there's a rheumatologist, physiatrist, medical doctor,

1 clinical epidemiologist, biostatistician, epidemiologist,
2 chiropractor epidemiologist, physical therapist,
3 biomechanist, medical doctor, clinical epidemiologist and
4 chiropractor, clinical epidemiologist.
5 Then there's a physical therapist, clinical
6 epidemiologist. Then there's a medical specialist in pain
7 medicine. Then there's a medical specialist in
8 rheumatology. Then there's a chiropractor, who is a
9 physiatrist.
10 Then there's a neurologist. Then there's
11 an orthopedic surgeon. Then there's a chiropractor,
12 health policy person. Then there's a patient advocate.
13 Then there's a health economist. Then there's a medical
14 doctor, pharmacol epidemiologist. Then there's a medical
15 doctor, clinical epidemiologist. Then there's a professor
16 of epidemiology from the states, Ann Arbor, Michigan.
17 Then there's a physical therapist, Ph.D.
18 scientist, rehab scientist. Then there's a medical
19 epidemiologist from the University of Bordeaux. Then
20 there's an orthopedic surgeon from Houston, Texas, and
21 then there's an orthopedic surgeon from Japan.
22 Q So it doesn't look like it was a bunch of
23 chiropractors who got together to help make this paper?
24 A No, and, also, there is a chapter in this, which

1 I would direct you to, and then, after that, there's a
2 list of research associates, too. I didn't go through all
3 that.
4 DR. ROBOTHAM: No need, sir. That's
5 plenty. Thank you.
6 EXAMINATION BY MR. PACILEO:
7 Q Thank you, Doctor. Just to give you some sense,
8 I'm one of the two Public Members on the Board, so if you
9 may forgive some of the elementary questions I might have?
10
11 When Attorney Malcynsky was questioning you
12 much earlier this morning, you had a discussion about
13 cause and association. Can you describe to me the
14 differences between those two and why you emphasized
15 association, as opposed to cause?
16 A Right. Studies can look at associations, but
17 you have to take those studies and do what we call causal
18 reasoning. That's how we teach epidemiologists. So they
19 would take into account the study design and what the
20 study is showing and what all studies are showing and then
21 make causal inferences, so that, for example, in our
22 study, we show these associations, and then we make
23 differing causal inferences and talk about different
24 potential causal pathways.

1 Q So if I were to sequence that in my mind, an
2 association occurs first and then a cause?
3 A Yes.
4 Q Okay. In my notes I wrote down, and just let me
5 know if you agree with this statement, that you can't
6 calculate risk without a control group. Is that a correct
7 understanding?
8 A That's right.
9 Q Additionally, earlier, you talked about excess
10 risk. In terms of the concept of risk, I believe I
11 understood your testimony correctly, that there is an
12 underlying risk inherent in what you were studying. Is
13 that a correct understanding?
14 A Yes.
15 Q And you did not find any excess risk when you
16 looked at the data relative to a chiropractor and a
17 primary care physician. Is that also a correct
18 understanding?
19 A When we compared the chiropractic analysis to
20 the physician analysis, so one of our causal pathway
21 reasonings is that physicians serve as a proxy for the
22 background risk, so if you subtract that association, due
23 to physician and stroke from the chiro and stroke, well,
24 they're the same, so you're left with no excess risk.

1 Q Okay. Thank you. During some questioning from
2 Attorney Pattis, you had a discussion about the role that
3 abstractors play. Are abstractors trained? Do they have
4 a formal education? Can you major in being an abstractor,
5 or is that something that you gain experientially?
6 A They are trained.
7 Q Okay.
8 A They're professional abstractors.
9 Q So when you say they're trained professionally,
10 are you implying that there is a practice that they
11 follow, which would limit the variability or
12 interpretation of what it is they're looking at?
13 A Yes, and there are lots of studies on agreement
14 between CIHI abstractors and other abstractors.
15 Q Okay, so --
16 A And the agreement is pretty good.
17 Q I'm sorry to interrupt. So an abstractor, is
18 that -- it's more science, far more science than art, or
19 is it a combination, in terms of how they do their
20 abstraction?
21 A Well I'm not sure what you mean by that
22 question. So they train them to go through the medical
23 record at the hospital and pull out the most important
24 diagnosis, and they spend time looking at the hospital

1 discharge summary, which is done by the physician in
2 charge.
3 And there's a whole institute in Ontario,
4 called ICES(phonetic), which focuses a lot on reliability
5 and validity of these codes.
6 Q So, from my perspective, would it be fair for me
7 to conclude that there is a high degree of consistency
8 from the work that abstractors do?
9 A Yes.
10 Q You also had a discussion about falsifying data,
11 and as an epidemiologist, in terms of your experience in
12 not just this study, but your association with other
13 studies, have you ever been able to quantify or determine
14 the degree of falsification of data in a study?
15 A In this study?
16 Q Well either this study or other studies. Is
17 there a way for you to determine whether data has been
18 falsified or not?
19 A Is there a way that I can determine whether data
20 is falsified?
21 Q As you're collecting the data, or as an
22 abstractor is collecting data, is there a way to determine
23 whether or not there's been data falsification?
24 A No.

1 Q You mentioned, as part of the I think the Smith
2 Study, that, as part of the peer review, that you had
3 written a letter to the editor, and you shared with us the
4 content of that letter.
5 Relative to this study, which is also peer
6 reviewed, has there been any, I guess using your words,
7 letters to the editor or similar kinds of comments related
8 to this study that we might or should be aware of?
9 A There was a letter to the editor of Spine about
10 our study, yes.
11 Q Can you share an overview of that, or give your
12 overview of that, please?
13 A I'd have to look at it. I don't have it with
14 me.
15 Q Okay.
16 A We did answer the letter, so I could provide
17 your Board with a copy of that letter and our answer to
18 that letter, and that raised some issues about the study,
19 which I think we addressed.
20 Q In terms of those issues, were they questions
21 about the study findings, the study selection? Can you
22 just give us a sense, or give me a sense of what they
23 might have been about?
24 A It was a hard letter to understand. It raised

1 issues about the reasoning around the study, so we did our
2 best to answer it.
3 Q Okay. Have there been any other letters to the
4 editor, so to speak?
5 A No.
6 Q My last question is you mentioned, I believe,
7 and I don't recall who asked it specifically, but with
8 regard to another study, and I think you mentioned that
9 you were currently doing another study?
10 A We're currently looking at the same databases,
11 yes.
12 Q Okay and is it conceivable that the look at
13 those databases may bring about a different outcome?
14 A No.
15 MR. PACILEO: Okay. All right, thank you,
16 Doctor.
17 EXAMINATION BY DR. POWERS:
18 Q Dr. Cassidy, just one other question. Did
19 osteopaths figure into your study at all, osteopathic
20 physicians in Canada? Did they get lumped in with MDs, or
21 were they just not included?
22 A I don't think there are any -- I'm not sure, but
23 osteopaths are not common in Ontario, but there may be
24 some. I don't know any, or know of any, and their

1 billings aren't in the OHIP database, so they weren't
2 included in the study if they were treating patients.
3 Q What about physical therapists? There's been
4 some discussion that PTs do manipulation of the spine, as
5 well.
6 A They are not in the OHIP database.
7 DR. POWERS: Thank you.
8 EXAMINATION BY DR. IMOSSI:
9 Q Sorry, Dr. Cassidy. One last question about
10 your study while we have you here. It's been brought up
11 about the exact treatments. Now do we know if
12 chiropractic adjustments were performed on all these
13 patients? We don't know at all? In Canada, is it a
14 global, an exact service is not put in, or do you know if
15 some of these people just had maybe an office visit,
16 without a treatment?
17 I know we've said you don't know how many
18 have had cervical manipulation, but do you know how many
19 of them actually were adjusted?
20 A Well it's my understanding that most visits to a
21 chiropractor would involve manipulative treatment. We did
22 exclude visits for x-rays, so there are billing codes that
23 indicate the chiropractor took an x-ray, and we excluded
24 those codes. We did not exclude -- if it was a treatment

1 code, we included them, or diagnostic code.
2 Q But there was a separation between treatment
3 codes and exam codes?
4 A Radiographic examination, yes.
5 Q So those were taken out. Those weren't
6 included. Only cases where the patient did receive
7 treatment?
8 A They're not treatment codes. They're diagnostic
9 codes, so in order to bill that, they have to give a
10 treatment, but the code reflects the diagnosis.
11 DR. IMOSSI: Okay. All right, thank you.
12 MR. MALCYNSKY: I just had a brief
13 question, follow-up question.
14 BY MR. MALCYNSKY:
15 Q Board member Pacileo brought up a couple of
16 points. I just wanted to ask a couple of specific
17 questions. He brought up the ICES study, I believe. I
18 just wanted to read you the conclusion of the ICES study
19 and just ask you if you agree or disagree.
20 "In conclusion, our analysis documents
21 strengths and weaknesses of coding practices at OCCI
22 facilities. The results highlight the need for caution
23 among health services researchers and policy makers, who
24 use CIHI data, the importance of initiatives to improve

1 data quality in Ontario, and the need for periodic
2 reassessment of the data quality." Would you agree with
3 that?
4 A Yes.
5 Q Okay. The other thing he brought up was
6 falsification of data, and, obviously, the credentials,
7 your credentials as a researcher, given your testimony and
8 your involvement in what has become such an important
9 study here, is important.
10 Have you ever been the subject of a lawsuit
11 by one of your research colleagues, calling into question
12 your methodology or your conduct in that research?
13 A Yes, I have.
14 Q Can you tell us what that involved?
15 A That there was, in a study I published in the
16 New England Journal of Medicine, that looked at tort and
17 no-fault insurance systems and recovery in Saskatchewan.
18 We had a study group that included a student that was
19 finishing her Ph.D. in biostatistics. She was one of many
20 people that was working on that study. She became unhappy
21 with working at the University of Saskatchewan, and one
22 day she left and erased data from that study, so we
23 notified the campus police, because you're not supposed to
24 do that, and they went to see her, and she launched a

1 wrongful dismissal lawsuit against the University of
2 Saskatchewan and also named me.
3 In that lawsuit, there was a paragraph that
4 suggested that we pressured her to do analyses that she
5 didn't agree with. Of course, when that statement of
6 claim was released, the University was made aware of it,
7 and they shut down the study, they brought in an
8 independent group of scientists to review everything we
9 did, including everyone that worked for me on that study
10 was interviewed, all the graduate students were
11 interviewed, all of the associated scientists were
12 interviewed, and they found no wrong doing, no
13 falsification of data.
14 Eventually, I was dismissed from that
15 lawsuit, and the Dean wrote a letter, which I could give
16 to this Commission, absolving me and everyone else on the
17 study of any wrong doing.
18 Quite frankly, I think that that was a ploy
19 by malpractice lawyers, who didn't like the results of our
20 study, who didn't like no-fault insurance.
21 Q Was there a finding, as to that?
22 A Yeah. Sure. We found that people recovered
23 faster --
24 Q No. I mean was there a finding by this

1 independent board of scientists that cleared all the
2 research? Did they find that this was a ploy by trial
3 attorneys?
4 A No. That's my speculation.
5 Q Oh, okay. Thank you for clearing that up.
6 A Would you like me to read the letter from the
7 Dean?
8 Q No, that's fine.
9 A Okay.
10 Q One last question. Board member Imossi just
11 asked you about whether your study specifically considered
12 manipulation, and I believe you said it was my
13 understanding that chiropractic visits always involve
14 manipulation?
15 A Yeah. There are studies of that. There's a
16 very good study by Eric Hurwitz, who is an epidemiologist
17 in the U.S. here, and he studied visits to chiropractors
18 in Ontario and in the U.S., and we cite that study.
19 In the introduction somewhere, we talk
20 about it, so I'd have to find that section.
21 Q I guess what I'm trying to get at, specifically,
22 is you said it was your understanding that all visits
23 involved manipulation. Do you have any data that
24 indicates that that, in fact, was the case?

1 A Yes, and I'll quote. "Approximately 12 percent
2 of American and Canadian adults seek chiropractic care
3 annually, and 80 percent of these visits result in spinal
4 manipulation. Reference seven and eight."
5 Q But, in your study, did you endeavor to identify
6 which visits involved cervical manipulations and which did
7 not?
8 A No. We couldn't do that.
9 MR. MALCYNSKY: Thank you. No further
10 questions.
11 MR. SHAPIRO: Anything further?
12 MS. MOORE LEONHARDT: I just have a couple
13 of follow-ups, if I may.
14 MR. SHAPIRO: Okay.
15 THE WITNESS: I wonder if we can take a
16 little break. I've been drinking a lot of water.
17 (Laughter)
18 CHAIRMAN SCOTT: Okay. We'll take five.
19 (Off the record)
20 BY MS. MOORE LEONHARDT:
21 Q Dr. Cassidy, would you please take a look at the
22 page from Neurology, 61, dated November of 2003? Is that
23 the article or the letter to the editor to which you were
24 referring in your testimony relative to the Smith Study?

1 A Yes, it is.
2 CHAIRMAN SCOTT: Could we have a copy of
3 that?
4 MS. MOORE LEONHARDT: Yes.
5 Q Earlier, you summarized what is contained in
6 this letter to the editor?
7 A Yes.
8 MS. MOORE LEONHARDT: All right. I'd like
9 to offer it to the Board as a full exhibit, so they have a
10 complete record.
11 MR. SHAPIRO: Attorney Malcynsky, any
12 objection?
13 MR. MALCYNSKY: I don't have any objection
14 to her asking him questions about the letter. I think
15 admitting it as an exhibit at this point, since it wasn't
16 part of any of the pre-filed materials, you know, might be
17 going a little too far.
18 If she wants to question him about the
19 letter and have him read some of the text of his letter
20 and testify about it, I think that that's fair game.
21 MR. SHAPIRO: Attorney Pattis, do you have
22 any objection?
23 MR. PATTIS: I'll take no position.
24 MR. SHAPIRO: Okay.

1 MR. MALCYNSKY: Thanks, buddy.
2 MR. PATTIS: I object strenuously and adopt
3 Attorney Malcynsky's remarks in whole and in part and ask
4 for several exclamation points to be included on the
5 transcript. Is that better?
6 MS. MOORE LEONHARDT: Speaking motion.
7 MR. SHAPIRO: Does the Board have a -- just
8 whether to admit the letter. Dr. Cassidy, why don't you
9 describe the letter briefly and what it is and who it was
10 sent to?
11 THE WITNESS: It's a letter to the editor
12 that Dr. Pier Cote, Dr. Scott Holderman and I wrote to the
13 editor of Neurology about the concerns that I raised about
14 the Smith Study, and we talk about the selection of the
15 controls.
16 If you recall, the controls were other
17 strokes, which would make them less likely to --
18 CHAIRMAN SCOTT: Dr. Cassidy, we will take
19 the letter in.
20 THE WITNESS: Pardon me?
21 CHAIRMAN SCOTT: We will take the letter in
22 as a full exhibit.
23 MR. SHAPIRO: This will be marked as
24 Exhibit 72.

1 MS. MOORE LEONHARDT: Thank you.
2 (Whereupon, the above-mentioned document
3 was marked as Exhibit No. 72.)
4 MR. SHAPIRO: You can continue.
5 Q Dr. Cassidy, you also referred to a situation
6 involving a Dr. Barfay(phonetic) and described the U.S.
7 committee findings of no evidence of research misconduct
8 and a letter of exoneration by Dr. Popkin at the College
9 of Medicine, University of Saskatchewan? I can't say it.
10 A Saskatchewan.
11 Q Saskatchewan. Thank you. Do you have a copy of
12 that letter before you?
13 A Yes, I do.
14 Q And attached to the letter is a report of the
15 committee finding no evidence of research misconduct?
16 A Yes.
17 MS. MOORE LEONHARDT: I'd like to offer it.
18 MR. SHAPIRO: Attorney Malcynsky, any
19 objection?
20 MR. PATTIS: I have an objection. I don't
21 know what it is. I don't know whether it's res judicata,
22 meaning something that's been fully and fairly litigated,
23 or merely an administrative finding, so I don't think it
24 bears any independent indicia of reliability.

1 If there's been testimony about it, the
2 letter will merely confirm what the doctor said, but we
3 don't know the underlying basis and can't, absent a
4 record.
5 DR. POWERS: Excuse us just one second.
6 MR. SHAPIRO: Okay. The Board is not going
7 to accept that in as evidence, but we've noted the
8 testimony.
9 MS. MOORE LEONHARDT: Thank you. I have
10 nothing further.
11 MR. SHAPIRO: Is there anything further?
12 Thank you, Dr. Cassidy.
13 CHAIRMAN SCOTT: Okay. We're going to take
14 a break for lunch now until 1:15. Thank you.
15 (Lunch recess)
16 CHAIRMAN SCOTT: Everybody take a seat,
17 please. Thank you. Please call the next witness.
18 MR. SHAPIRO: The next witness is Dr. Katz.
19
20 DR. MURRAY S. KATZ
21 having been called as a witness, having been duly sworn,
22 testified on his oath as follows:
23
24 COURT REPORTER: Please state and spell

1 your name for the record, please?

2 THE WITNESS: Murray S. Katz, K-A-T-Z.

3 MR. SHAPIRO: Good morning, Dr. Katz. Good

4 afternoon. I believe you submitted testimony with Ms.

5 Mathiason, who was taken out of order to accommodate her

6 schedule, and the documents, in terms of your pre-filed

7 testimony and your rebuttal testimony, I believe have been

8 marked as Exhibits 44 and 49.

9 Do you adopt the testimony that you

10 submitted in Exhibit 44 and 49 under oath?

11 THE WITNESS: I do.

12 MR. SHAPIRO: Okay and I noticed that, with

13 respect to the rebuttal testimony, that --

14 THE WITNESS: I'm sorry. I do. I was

15 thinking of something else. I do.

16 MR. SHAPIRO: Okay. That Dr. Long is on

17 the rebuttal testimony.

18 THE WITNESS: Yes.

19 MR. SHAPIRO: And Dr. Long the Board had

20 denied his request to designate another individual to

21 present his testimony, so my suggestion to the Board is

22 that Dr. Long be removed from the rebuttal testimony.

23 I don't believe he's on the direct

24 testimony, is that correct?

1 THE WITNESS: We agree with that removal.
2 MR. SHAPIRO: Okay. Is there any objection
3 to removing Dr. Long from the rebuttal testimony?
4 MS. MOORE LEONHARDT: This is Attorney
5 Moore Leonhardt. Thank you for identifying that issue,
6 Attorney Shapiro. I was going to raise it myself. I
7 believe that it's properly stricken, but my question was,
8 if Dr. Katz could take a look at the submission and tell
9 us what in the submission belongs to Dr. Long, or is he
10 capable of separating it out, or is the testimony all
11 commingled?
12 MR. PATTIS: I would object. That
13 procedure is unnecessary on the theory that if he's
14 adopting it, he's adopting it. We're simply removing the
15 name of a non-participating --
16 MR. SHAPIRO: I tend to agree with that,
17 Attorney Moore Leonhardt, that he's adopted this testimony
18 as his own, and we're removing Dr. Long from that
19 testimony.
20 MS. MOORE LEONHARDT: All right. I can
21 cover any other questions that I have with him under
22 Cross, then.
23 MR. SHAPIRO: Okay.
24 MS. MOORE LEONHARDT: Thank you.

1 MR. SHAPIRO: Attorney Malcynsky, any
2 objection?
3 MR. MALCYNSKY: No objection.
4 MR. SHAPIRO: Okay, so, his name will be
5 removed, crossed out, and I'll have the Board Chair just
6 initial that cross out. I would now suggest that Exhibits
7 44 and 49 be admitted as full exhibits. Any objection?
8 MS. MOORE LEONHARDT: My standing objection
9 with regard to the lay witness testimony and not
10 recognizing any of the opinions that are contained in
11 these documents as expert opinion testimony.
12 MR. SHAPIRO: Okay.
13 MS. MOORE LEONHARDT: Thank you.
14 MR. SHAPIRO: Attorney Malcynsky?
15 MR. MALCYNSKY: I would just ask that the
16 Board, you know, adopt the same standard they have with
17 witnesses up to this point, that the Board can consider
18 the credibility of the testimony as it's received.
19 MR. SHAPIRO: Okay. Attorney Pattis,
20 anything?
21 MR. PATTIS: Only that we believe that he
22 is qualified as an expert, and that there was no
23 requirement in the scheduling order that experts
24 designate.

1 MR. SHAPIRO: Okay. With that noted,
2 Exhibits 44 and 49 are now full exhibits.
3 (Whereupon, the above-mentioned documents
4 were marked as Exhibit Nos. 44 and 49.)
5 MR. SHAPIRO: Dr. Katz, I'd like you to, if
6 you choose to, you may make a brief statement with respect
7 to your testimony with respect to the question in your
8 pre-filed testimony and then be subject to Cross-
9 Examination.
10 THE WITNESS: I'm going to refer you to
11 page, to paragraph 217 of my submission, the comments of
12 Mrs. Sharon Mathiason, who we all heard here and whose
13 inquest I testified as an expert on behalf of the family.
14 And David Cassidy, who was just here, also testified at
15 that inquest, taking the opposite position, but, as he
16 said, admitting that he, himself, had caused a stroke.
17 Mrs. Mathiason objected to the fact that
18 the chiropractors tried to blame her, because her left
19 vertebral artery was bigger than her right vertebral
20 artery, and, in fact, having a larger left vertebral
21 artery than a right vertebral artery is a normal situation
22 in over 80 percent of people, because the left vertebral
23 artery comes directly off the brachial trunk, so that's a
24 normal variation.

1 What we are hearing here today and I think
2 the one part that bothered me, personally, if
3 chiropractors are causing strokes, this whole study, the
4 Cassidy Study, which will be part of what I'm going to
5 talk about, but a lot of other things, as well, is
6 basically saying the patient is to blame, that they had
7 the stroke within 30 minutes, as the Holderman Study
8 showed in 75 percent of patients, because they were to
9 blame, which is the same as saying that if I jaywalk
10 across the street and I get hit by a car, I am dead,
11 because I jaywalked, but think I'm dead because I got hit
12 by the car, because a lot of people jaywalk and don't get
13 hit by cars, and the people who jaywalk and don't get hit
14 by cars will live until their 90s, if they don't keep
15 jaywalking.
16 So the whole Cassidy Study is saying there
17 is in the statistics a 34 percent or 37 percent increase
18 in risk of seeing a chiropractor as an independent factor,
19 however, if you happen to see a doctor, too, we're no
20 longer responsible.
21 One has absolutely nothing to do with the
22 other. The first type of stroke, that's the Holderman
23 Study done in '64, published legal cases, which is quoted
24 in my pre-filed testimony, said that 75 percent of these

1 strokes happen within 30 minutes on the table, and the
2 rest all happen within 48 hours.
3 The person leaving the chiropractic office,
4 if you look at the records of what happened, they say,
5 well, I got hit by a car. That's why I had a dissection.
6 That's why I'm in the hospital.
7 I was playing volleyball, as is published
8 in the CMAJ report, which says the main two predicaments
9 of vertebral artery stroke are one that we can prevent,
10 which is highest neck manipulation being done
11 unnecessarily, and the other we cannot prevent, which is
12 people getting hit by cars, or playing volleyball, or
13 doing something at Walmart.
14 The analogy to say that the people are
15 safe, because you're safe from a doctor's office, an
16 actual fact I'll explain, if you use the same ICD 9 codes
17 that Cassidy used of tension headaches, migraine, muscular
18 rheumatism, which is actually a code related to a disease
19 called Lupus and rheumatoid arthritis, nothing to do with
20 neck strokes happening, but he included it in his program,
21 muscular rheumatism, has got nothing to do, because if I
22 asked someone at Walmart, as a Canadian stroke consortium
23 study said, lifting a peck can cause a dissection, if I
24 asked someone at Walmart, ask the next 100 people who come

1 in if they have a tension headache, if they have a
2 migraine, if they have a pain in the neck and send this
3 data to Cassidy, we'd get exactly the same results.
4 It has nothing to do with what happened in
5 the doctor's office, nothing, because the codes he used to
6 imply that people are going to a doctor for neck pains, he
7 didn't include neck pain, by the way, he included neck
8 strain, the one code he didn't include, which is what the
9 chiropractors are all saying, no pain, so, logically, if
10 no pain is the most important sign of a dissection about
11 to happen, he should have had a code for no pain, not just
12 for pain. It makes no sense to us, as someone who
13 teaches, as someone who looks at these ICD codes.
14 The other thing that is in my pre-filed
15 testimony, and I was very, very surprised to hear, is, in
16 paragraph 213, where Cassidy and his statistics left out
17 the first day, and we went over this with our own
18 statisticians, and I even spoke with one of his
19 statisticians, which they were not too happy about, but,
20 anyways, that's not the point.
21 The point is we share academic information
22 freely and equally amongst us for the good of the patient.
23 That's the bottom line. So, in 213, he left out the
24 first day, and what does Holderman say?

1 Now Cassidy said he did not know of any
2 previous study related to events the first day. Well this
3 Holderman Study was published in Spine, the same journal
4 that Cassidy published in, it was published by Holderman,
5 who is head of the Bone and Stroke Division, which he
6 referred to and he worked with, so to leave out the first
7 day and say he could not comment, because people, if they
8 had a stroke, were going not to the chiropractor, but the
9 doctor, but what the 213 shows is that they had the stroke
10 at the chiropractors the first day. Ninety-four percent
11 were within two days, and 75 percent were within 30
12 minutes.
13 There’s a bunch of other little things that
14 we can go over in this whole report that really sort of
15 strike me. We are trying to err on the side of caution.
16 We are trying to err on the side of people.
17 These tragedies, we talk about risk being
18 rare, and I’ll talk about that later on when I comment on
19 the studies, there’s a qualitative aspect to risk. These
20 women and these people are not people with cancer.
21 They’re not diabetics. They don’t have a brain surgery.
22 They don’t need to take a risk.
23 They are people with a musculoskeletal
24 complaint. No one should die and no one should have a

1 stroke for a musculoskeletal complaint. It shouldn't
2 happen. It doesn't happen with the physical therapists,
3 because the physical therapists don't do 99 percent of the
4 time, and I worked with them on this, the high velocity
5 type of rotary neck manipulations, and since they don't do
6 it, we don't see cases from them, so it's got nothing to
7 do with that.
8 There's a qualitative aspect. These are
9 young women, who are ending up losing their families,
10 changing their lives completely, and we have to err on the
11 side of caution.
12 The last point I'm going to make is that
13 the solution we recommend in our submission is to make a
14 level playing field between what doctors are required to
15 do and what chiropractors should be required to do.
16 Doctors are required to adhere to a
17 procedure monograph. Every drug that I prescribe, and I
18 gave the example in document one, the very first one,
19 because I thought it was important, of the drug Ritalin,
20 and I list all the things that can happen if someone takes
21 Ritalin. You can die. You can have a heart attack.
22 There's so many things --
23 (Off the record)
24 THE WITNESS: But we have to tell the

1 patient that, because that's part of the procedure
2 monograph given to us by an independent body, the Food and
3 Drug Administration or the Health Protection body, and the
4 licensing boards and this board regulates the profession,
5 based on those monographs.
6 So our solution to this problem is
7 procedure monograph, which I have copies of here, and I
8 mentioned in my pre-filed testimony in detail, but this is
9 in a little pamphlet form to make it perfectly clear, is
10 that there should be the same level playing field for
11 doctors as for chiropractors.
12 We should have a procedure monograph, which
13 says that highest neck manipulation is good for this, but
14 it's not good for autism or attention deficit disorder,
15 because the more we do of it of course the more we
16 increase the risk of a stroke.
17 And I've lectured, by the way, at the
18 hospital on stroke in children. It does happen. And I
19 was introduced to chiropractor the very first time, I had
20 no idea what it was about, when I met a 10-year-old boy
21 when I was a senior resident in pediatrics at the
22 Children's Hospital, who was brain damaged by a
23 chiropractor, and I said, what happened? I think
24 chiropractors are some sort of doctor physical therapists.

1
2 So this is our solution, the procedure
3 monograph. I don't know if people actually have a copy of
4 the pamphlet. It shows the vulnerability of the artery.
5 There's one final point I want to make, is
6 that Cassidy in his statistics left out the fact that 28
7 percent, which is documented in the studies I referred to,
8 of all thromboembolic events are not in the neck, due to
9 neck manipulation. They're in the front in the carotid
10 artery.
11 So he left out over one quarter of all
12 thromboembolic events, which are taking place not in the
13 vertebral arteries, but in the carotid artery. So the
14 carotid artery is a big cause and a documented cause in
15 the literature of stroke and death.
16 There's two ships going by here. There's
17 one ship, which says it never happens and it can never
18 happen, that if you cross the street, if you jaywalk, it's
19 not the car that killed you. It's your jaywalking.
20 In our report, we documented 150 case
21 reports. You go to the chiropractor, you have your neck
22 manipulated, within 30 minutes you have a stroke.
23 Something has happened.
24 Whether you're a criminal, whether you

1 jaywalked on the way to the chiropractor's office is
2 incidental. There could be two causes, but the second
3 cause happens to cause the problem.
4 It's like saying I'm driving my car and I
5 hit a tree and my face is bashed in, so we know why, or
6 I'm driving my car and I miss the tree, but my face is
7 still bashed in. So it doesn't make logical sense to say
8 and to be forgiven for having caused a stroke. Well now I
9 did a statistical study that will absolve you.
10 There's no statistical study that will
11 change the basic anatomy of the vertebral artery and the
12 carotid artery, and there's no statistical study that will
13 say that star gazing and playing yoga and 53 other things
14 that Lauretti mentioned can cause a stroke, but someone
15 taking your head and rotating it beyond the normal
16 anatomical physiological space was what they describe
17 cannot cause a stroke.
18 So I'm happy to be here in memory of Laurie
19 Jean Mathiason, and Mrs. Mathiason called to personally
20 thank you all for listening to me.
21 MR. SHAPIRO: Attorney Moore Leonhardt?
22 MS. MOORE LEONHARDT: Thank you.
23
24 CROSS-EXAMINATION

1 BY MS. MOORE LEONHARDT:
2 Q Good afternoon, Dr. Katz.
3 A Good afternoon.
4 Q It's nice to see you in person. You're better
5 looking in person than you are on the McGill website.
6 MR. PATTIS: Objection, as to flirtation.
7 A Well you should see my passport. (Laughter) I'm
8 feeling good today, because I'm not playing golf with my
9 wife, who is a scratch golfer, and just drag me through
10 200 sandpits at the Honda Classic, but go ahead.
11 Q Well let me ask you about that. Playing golf,
12 isn't that a situation where a person might be turning
13 their head and rotating their neck in such a way and they
14 could have a VBA dissection?
15 A Absolutely.
16 Q Thank you. Same thing with gardening, bending
17 your head down and gardening? That could cause a
18 spontaneous dissection?
19 A One of the things a stroke can --
20 Q Excuse me. I'm just asking questions that ask
21 for a yes or no answer.
22 MR. PATTIS: Objection to interrupting the
23 witness. May he be permitted to finish?
24 MS. MOORE LEONHARDT: No. The answer

1 called for a yes or no answer.
2 MR. PATTIS: I call for a ruling, please.
3 I'd ask for a ruling.
4 MR. SHAPIRO: Counsel, we're all not going
5 to talk over each other.
6 A I think that any activity, which causes you to
7 rotate your head and especially if it's an extension, so
8 there's qualitative things. A hairdresser is more
9 dangerous, because your head is held in extension and its
10 rotation.
11 The neck manipulations, which are done in
12 the lower neck inflexion, I do not believe cause a
13 problem, and neck movements, which are in the lower neck,
14 four, five, six, seven, eight, where there is no artery
15 going around the corner, which are done in flexion, I
16 think are perfectly safe, and commend some chiropractors,
17 who do that and the physical therapists that do that for
18 helping people.
19 Q And you'd agree that vertebral arteries tear
20 just when someone is sneezing sometimes, isn't that true?
21 A Yes, but it's not as important to cause as
22 extension rotation, which is what the Canadian Medical
23 Association Stroke Consortium data showed.
24 Q I'm going to get to the neck rotation and

1 whether it's within or without the normal range of motion
2 later.
3 A Sure.
4 Q So let's back up here, and I've got a few
5 questions about your qualifications. If you'd take a look
6 at the first page of your submission, please?
7 MR. MALCYNSKY: Objection. I thought that
8 we're past the determination about whether he's
9 appropriate to testify as an expert. Is that what you're
10 questioning now?
11 MS. MOORE LEONHARDT: No. I'm not going
12 there.
13 MR. MALCYNSKY: Oh, okay. I thought you
14 said qualifications. I'm sorry.
15 MS. MOORE LEONHARDT: No. I asked him to
16 take a look at the first page of the submission.
17 A The introduction page, or the one with Laurie
18 Jean Mathiason?
19 Q The cover page.
20 A Laurie Jean Mathiason?
21 Q Yes.
22 A Yes.
23 Q With your name on it.
24 A Yes.

1 Q Now you have some initials after your name.
2 Could you explain what those initials are?
3 A I'm a graduate of the Faculty of Medicine --
4 Q No. Excuse me.
5 A Oh, what the initials are?
6 Q Just what the initials mean. That's all.
7 A Yeah. It's Medical Doctor and Surgical Master.
8 Q Surgical Master?
9 A Surgical Master.
10 Q I see. And does that stand for anything in
11 particular, Surgical Master?
12 A It's a medical degree from the Faculty of
13 Medicine of McGill University with a Surgical Master
14 title.
15 Q And the area of practice that you practice
16 medicine in is pediatrics, as I understand it, isn't that
17 true?
18 A Yes. I completed a junior and senior residency
19 at the Montreal Children's Hospital, and then I went into
20 family medicine. There was a program at the Children's
21 Hospital, a pilot project. I did that for two years. And
22 then I went back to pediatrics, and I practiced it for 30
23 years. I'm on staff at the Montreal Children's Hospital,
24 Department of Neonatology, The Jewish General Hospital.

1 I'm officially listed in Quebec as being
2 part of the Family Practice Division with a practice
3 limited to pediatrics. There's various designations, but
4 my official title is a Pediatric Practitioner.
5 I was Medical Director of the largest
6 Children's Medical Center in Canada for 13 years, which
7 took care of over a million children during that time.
8 Q Tiny Tots?
9 A Tiny Tots.
10 Q Is that the place?
11 A Yes.
12 Q Okay and, at Tiny Tots, one of your specialty
13 areas was doing circumcisions, wasn't it?
14 A My great uncle was the Chief Rabbi of the City
15 of Montreal, and until I was seven, I had a little payis
16 and a yamaka, and I got corrupted by pizza, and I do
17 circumcisions, yes.
18 MR. PATTIS: We'd like to stipulate that
19 none need be demonstrated here. (Laughter)
20 MS. MOORE LEONHARDT: Well speak for
21 yourself. (Laughter)
22 MR. PATTIS: If you need one, I'll watch.
23 THE WITNESS: If Norman has a problem, we
24 can offer him an extended warranty.

1 Q Now, Dr. Katz, you're a resident of Canada, are
2 you not?
3 A Yes, I am.
4 Q And you came all the way from Canada here today,
5 because you believe that Connecticut law has created
6 scientific disorder. Is that your belief?
7 A Yes.
8 Q That's something you stated in your materials,
9 isn't it?
10 A Yes.
11 Q What is it about the Connecticut law that you
12 think has created scientific disorder?
13 A The law says that we have vertebral
14 subluxations, and the law says that the neurology of the
15 spinal cord is determined by the space between the two
16 vertebrae, and we think that that is anatomically
17 incorrect.
18 First, that we start at the very top of the
19 neck, there is the first nerve does not go between two
20 vertebrae to start with. It's all documented in my
21 submission. If we go lower down, the cranial nerves are
22 not between the vertebrae. The pituitary system and the
23 whole endocrine system is not between two vertebrae.
24 The ganglia, which finally determined which

1 organ the nerves go to, is outside the vertebrae. If the
2 vertebrae subluxations are causing problems, we would
3 start by not being able to move our arms and legs, so to
4 create a law deciding that people have three legs, or they
5 have vertebral subluxations, is an anatomical fault.
6 That's not for the people to vote on and
7 the politicians to pass. It's for the anatomous(phonetic)
8 to determine. So the whole subluxation concept, with the
9 most important subluxation being the highest neck, is an
10 anatomical and neurological impossibility.
11 MS. MOORE LEONHARDT: Okay. Move to
12 strike. Non-responsive. You're aware that this hearing
13 is about this --
14 MR. PATTIS: Objection. Is this a speaking
15 objection, or is it argument?
16 MS. MOORE LEONHARDT: I move to strike as
17 non-responsive.
18 MR. SHAPIRO: Okay.
19 MR. PATTIS: I believe it is responsive.
20 She asked directly what's wrong with the law, and he told
21 her.
22 MR. SHAPIRO: I would recommend sustaining
23 the objection. I'm sorry. Overruling the objection and
24 allowing the testimony.

1 MS. MOORE LEONHARDT: You're allowing the
2 testimony and denying the motion to strike?
3 MR. SHAPIRO: Right.
4 MS. MOORE LEONHARDT: Thank you.
5 MR. SHAPIRO: That's what I'm recommending.
6 MS. MOORE LEONHARDT: Is that a ruling? I
7 accept your ruling, if that's what the ruling is. With my
8 back to you, I don't know if the Board is taking up a
9 motion or not. It's hard to keep turning.
10 CHAIRMAN SCOTT: Please continue.
11 MS. MOORE LEONHARDT: Thank you.
12 Q Dr. Katz, just my sitting here today and turning
13 around to talk to the Board, I could have a vertebral
14 artery tear, couldn't I, the way that I'm turning my neck
15 to get all the way around to look at Attorney Shapiro?
16 A Yeah.
17 Q That could cause a spontaneous tear, would it
18 not?
19 A Especially if you had, according to Cassidy,
20 muscular rheumatism.
21 Q Right, but we don't know that I do.
22 A Well, if you did, but he coded it as a risk.
23 Q Now you came here from Canada, and I take it
24 it's your belief that you want to change the law in

1 Connecticut, as you just stated it?
2 MR. PATTIS: Objection, as to form.
3 A No. I don’t want to change the law. I think,
4 eventually, these laws, which created anatomical
5 impossibilities, should be changed, but I think the
6 primary objective now is to focus on one simple thing.
7 I’m not here to attack all of chiropractic. I just made a
8 good comment about chiropractors. I know a lot of
9 chiropractors I’ve got a lot of respect for. I’m here to
10 focus on one thing.
11 There’s an increased risk of people going
12 and having a neck manipulation, or sneezing, or crossing
13 the street and getting hit by a car. I want people to be
14 warned, clearly and precisely, on the same level playing
15 field as doctors are required to warn people about drugs,
16 that there is a risk, and I want, because we know, if you
17 look at the Holderman Study, that a good percentage of
18 these people, and we look at the Lana Dale Lewis Inquest,
19 which I was a legal agent for for awhile, that this lady
20 went home for a week and came back and went home and then
21 died.
22 So we know that there’s a window of
23 opportunity, because there’s over 22 different types of
24 strokes that are being associated with neck manipulation,

1 and coughing, and turning your head around, but not as
2 many, because the neck manipulation strokes tend to be
3 much more severe, because there's severity of strokes.
4 You don't get locked-in syndrome from
5 turning your neck.
6 Q What I'm trying to understand, because that
7 answer was quite lengthy, is the nub of it all is that
8 you're trying to eliminate highest neck manipulation?
9 A No.
10 Q Is that what you're trying to eliminate?
11 A No. No. No, no, no. The procedure monograph
12 that I proposed does not, in any way, inhibit any
13 chiropractor from doing highest neck manipulation for
14 valid and proven musculoskeletal complaints, but all of
15 these witnesses who testified before you have a problem
16 with informed consent.
17 They had a musculoskeletal complaint, and
18 what they were consenting to was a diagnosis of vertebral
19 subluxations, and what they were consenting to was a neck
20 manipulation. I don't think they had any idea that's what
21 they were consenting to.
22 Laurie Jean Mathiason, when she fell on her
23 tailbone, had no idea she was going to be diagnosed as
24 having bones --

1 Q Doctor --
2 A -- spine.
3 Q Dr. Katz, were you present when Laurie Jean
4 Mathiason fell on her tailbone?
5 A No, I was not.
6 Q You don't know what she was thinking at the
7 time, then, do you?
8 A Well --
9 Q It calls for a yes or no answer.
10 A No.
11 Q Thank you. Now have you ever been trained as a
12 Doctor of Chiropractic Medicine?
13 A No.
14 Q You haven't been trained as a physical
15 therapist?
16 A No.
17 Q You haven't been trained as a massage therapist?
18 A No.
19 Q You haven't been trained as an osteopath?
20 A No.
21 Q You haven't been trained as a physiatrist?
22 A No.
23 Q You haven't been trained as a naturopath?
24 A Absolutely not.

1 Q You're trained as a pediatrician?
2 A That's right. Pediatric Practitioner.
3 Q Right, and you have -- have you ever represented
4 yourself as a chiropractor?
5 A Yes.
6 Q And when was that, Dr. Katz?
7 A I was working on a show with 20/20, and we
8 thought we would do a test to see what would happen if we
9 videotaped people going to chiropractors' offices, as
10 opposed to what they would actually tell us, and, in order
11 to do that, I listed myself as a chiropractor for that
12 program and saw what types of answers I got back, but I
13 did not represent myself as legally practicing
14 chiropractic. We also, by the way --
15 Q Isn't it true --
16 A Go ahead.
17 Q Excuse me. Isn't it true that you got yourself
18 admitted to the Canadian Chiropractic College, based upon
19 a representative by a physician, that you were licensed as
20 a chiropractor in the United States?
21 A Absolutely not. Absolutely not. After the
22 Mario Tardiff 10-year-old boy case, I was curious about
23 chiropractic.
24 Q I asked you. You've answered my question.

1 There's no need for you to go further.
2 MR. PATTIS: I would request that the
3 witness be permitted to answer.
4 MS. MOORE LEONHARDT: He answered my
5 question. He said absolutely not.
6 MR. PATTIS: In the same way that Dr.
7 Cassidy was permitted to go beyond the yes or nos I
8 thought my questions called for.
9 A I have no idea what she's talking about.
10 Pardon? This doesn't say anything about -- what are you
11 referring to here?
12 Q Dr. Katz --
13 MR. PATTIS: May I get a ruling on my
14 objection, that he be permitted to finish his answers, in
15 the same way that Dr. Cassidy was.
16 A I never was admitted to the --
17 MR. SHAPIRO: Hold on one second, Dr. Katz.
18 A -- I never --
19 MR. SHAPIRO: Dr. Katz, there's no question
20 pending.
21 THE WITNESS: I'm sorry.
22 MR. SHAPIRO: Okay? And I want to make
23 sure that people aren't talking over each other. Were you
24 able to finish your last answer, prior to me handing you

1 this document?
2 THE WITNESS: Okay.
3 MR. SHAPIRO: No. I'm asking you if you
4 were able to finish your last answer.
5 THE WITNESS: I never applied to --
6 MR. SHAPIRO: I'm not talking about that.
7 THE WITNESS: What's the question?
8 MR. SHAPIRO: Why don't we just start from
9 here? Attorney Leonhardt, do you have questions, Moore
10 Leonhardt, do you have any questions on this document?
11 Q Did you ever gain entry into the Canadian
12 Memorial Chiropractic College by giving false information?
13 A I went to the --
14 Q That calls for a yes or no answer, Dr. Katz.
15 MR. PATTIS: I would object.
16 A It's no and yes, but mostly no.
17 MR. SHAPIRO: Dr. Katz, why don't you
18 explain that?
19 Q You did go into the --
20 MR. PATTIS: Objection. Dr. Katz was
21 invited to finish his answer by the Board. I'd request
22 that he be permitted to do so.
23 A I went to the Canadian Memorial Chiropractor
24 College, because I was curious to find out what

1 chiropractic was about. While I was there, I spoke with
2 some students. They asked me what I did. I thought that
3 if I said I was a doctor, I would not get the right
4 answer. I said I was a guidance teacher, trying to find
5 out about chiropractic, and I sat in on some lectures, and
6 watched some radiology rounds, and I left.
7 Q Dr. Katz?
8 A Yes.
9 Q Let me remind you you're under oath.
10 A Absolutely.
11 Q Is this true or not? You induced a friend in
12 the United States to supply you with a letter, which you
13 had prepared yourself, asserting falsely that you, under a
14 pseudonym, were a chiropractor, living in the United
15 States and wanted to move to Canada?
16 You also had yourself registered as a
17 chiropractor, and you did that by asserting that you held
18 the degree of Doctor of Chiropractic from Palmer College.
19 At the time, you had no such degree. You had never been a
20 student of Palmer College, and your representation was
21 false, was it not?
22 A I'm not aware of what you said.
23 Q You testified at a point in time before the
24 Ontario Ministry of Health that you had been able to gain

1 the confidence of a number of chiropractors, and, by using
2 various pseudonyms, you gained entry into the Canadian
3 Memorial Chiropractic College in Toronto, is that not
4 true?
5 A No, I did not gain entrance because of using a
6 pseudonym. I believe I used my own name.
7 Q Okay. I've just shown you a document that's
8 dated December 1998. Do you recognize that document?
9 A Yes, I do.
10 Q And this is a document that you created, is it
11 not?
12 A Yes, it is.
13 Q And in the one, two, three, fourth paragraph of
14 that document, would you please read that paragraph?
15 A "Should anyone criticize chiropractic, the
16 response, again, is words and, in many case, dirty tricks.
17 I am a particular target, because I went inside the
18 chiropractic organization and actually joined under an
19 assumed name. I was not the only person to do so. All of
20 us who really know what is going on are being subject to
21 the same type of dirty tricks."
22 My joining was to go on a website, which
23 there's various websites, and Spine Docs is one of the
24 most famous ones, and to join and to try to gather

1 information, as to what was going on.
2 Q My concern, Dr. Katz, is that just a few minutes
3 ago, you testified under oath that you did not enter that
4 college under an assumed name, and that's inconsistent
5 with what you just read and said were your very
6 statements, isn't that correct?
7 MR. PATTIS: Objection. Mischaracterizes
8 the document and the testimony, and it's not inconsistent
9 at all. I object.
10 MR. SHAPIRO: Regardless what counsel
11 thinks on both sides, I think the documents and testimony
12 will speak for itself, and the Board is perfectly capable
13 of making a decision about whether or not the testimony is
14 inconsistent, so you can ask him whatever questions you
15 need to ask him.
16 MS. MOORE LEONHARDT: Thank you.
17 Q You do agree that this statement said that you
18 went inside the chiropractic organization and joined under
19 an assumed name, don't you?
20 A I agree that I joined a chat line, exchanging
21 information. I never practiced chiropractic, and I never
22 registered for a license, and you said that some doctor
23 said I had. I'd like to know who the doctor is.
24 Q Dr. Katz, I'm directing you back to this

1 December 1998 document, which you authored, correct?
2 A Yes.
3 Q And on paragraph four of this document, you
4 admit that you went inside the chiropractic organization
5 and actually joined under an assumed name, isn't that
6 true?
7 MR. PATTIS: Asked and answered.
8 Objection.
9 A I joined a chat line.
10 Q I'm asking you to answer yes or no.
11 A Yes, but --
12 Q It is true?
13 A The term "organization" is a
14 mischaracterization.
15 MS. MOORE LEONHARDT: I'd like to offer it.
16 MR. SHAPIRO: Any objection?
17 MR. PATTIS: None.
18 MR. MALCYNSKY: None.
19 MR. SHAPIRO: Okay. This document, one-
20 page document, will be admitted as Exhibit 73.
21 (Whereupon, the above-mentioned document
22 was marked as Exhibit No. 73.)
23 Q Just so that we can orient everyone to that
24 document, Dr. Katz, what is that document from?

1 A The Dirty Tricks?
2 Q Yes.
3 CHAIRMAN SCOTT: What is The Dirty Tricks?
4 THE WITNESS: The Dirty Tricks, which I
5 have an updated version of, is part of an affidavit,
6 because, just to give you some background, in December of
7 this past month at a pre-trial declaratory finding in
8 Edmonton, Alberta, the chiropractors started down this
9 same road, about me misrepresenting myself, about events
10 in New Zealand, about events at the coroner's inquest in
11 Toronto.
12 At that point in time, the legal counsel,
13 Sandy Nette, offered to introduce an affidavit, a sworn
14 affidavit of mine, which I have here in court, to the
15 effect of what happened, how my office was broken into,
16 how private detectives were hired, how documents were
17 stolen from my office and showed up in brown envelopes in
18 the chiropractor's hand, and when I offered to submit that
19 affidavit, including the things you're talking about now,
20 the chiropractor lawyer in Toronto, Tim Danson, called and
21 asked that it be sealed, that it be dropped, and he does
22 not want anymore questioning about that, and that was
23 done.
24 If you want the affidavit, I can make it

1 available to you. If you want to continue down this road,
2 then I think it should be made available to you, because
3 it’s not pretty.
4 Q I’m not interested in your affidavit. I’m
5 interested in moving on to the question at hand.
6 A Well it will explain all of this.
7 Q We’re not interested. I’m here on the question
8 at hand.
9 A Well maybe we’ll have to submit it.
10 Q Dr. Katz, getting back to your training, so
11 we’ve established that you haven’t been trained as a
12 chiropractor, but I understand that you present yourself
13 as an orthopractic. Is that the correct term?
14 A No.
15 Q Do you have training as an orthopractic?
16 A No.
17 Q Do you know what the term “orthopractic” means?
18 A The term “orthopractic” was an -- there is a
19 group, called the Canadian Orthopractic Manual Therapy
20 Association. Their guidelines are on the internet, and
21 they’re part of my pre-filed testimony. They are -- let
22 me find it for you. Do you know where it is? It will
23 explain everything for you. Just hold on. The
24 Orthopractic Guidelines.

1 I don't have my little computer to pick it
2 up here, but it will explain exactly what orthopractic
3 guidelines.
4 Q While you're trying to find them, let me ask you
5 another question. Are you a member of the Orthopractic
6 Manipulation Society of North America?
7 A No.
8 Q And have you been involved with this
9 orthopractic organization at all in any capacity?
10 A Yes.
11 Q In what capacity have you been involved with
12 them?
13 A Robert Sydenham, who is a physical therapist in
14 Edmonton, who is now the President of the Canadian
15 Orthopractic Manual Therapy Association, is a physical
16 therapist, who does almost specifically manual therapy of
17 the neck, who I have the greatest respect for.
18 It's document six, by the way. And Robert
19 said that one of the ways we can perhaps make chiropractic
20 neck manipulation safer, which was my interest and I
21 mentioned I work with a bunch, because I even gave one,
22 Michael Carsis(phonetic), a reference to medical school
23 and he's now a physician, was to say, well, it's part of
24 informed consent that people should know what they're

1 consenting to.
2 Let's develop what are called orthopractic
3 guidelines, which is the basic of the procedure monograph.
4 By having these guidelines, we will say to chiropractors,
5 if you want to practice in this scientific way, highest,
6 lowest, whatever you want, neck manipulation, you can be
7 part of our group, so we developed these guidelines, which
8 are still in existence today.
9 The problem was is the minute the
10 orthopractic guidelines came out, which said you can't
11 claim bedwetting by neck manipulation, the Ontario College
12 of Chiropractors passed a regulation, saying, which I
13 think is also in here somewhere, that if anybody adheres
14 to the orthopractic guidelines, it's misconduct.
15 So despite a flurry of initially 100 or 150
16 chiropractors joining, they all dropped out. Even David
17 Cassidy, who was here today, wrote me a letter that he
18 wanted to be a member of the Canadian Orthopractic Manual
19 Therapy Association.
20 I can find the letter. I don't have it
21 with me, but he said there's a lot of things wrong with
22 what we're doing. I would like to be, and even on the
23 Board of the Canadian Orthopractic Manual Therapy
24 Association, so even David Cassidy, who was in

1 Saskatchewan at the time, offered to be a member.
2 So the guidelines are here in document six,
3 and they're reproduced in the --
4 Q And would --
5 A -- attempt to make it safe and invite everybody
6 in.
7 Q So you're suggesting that the orthopractic
8 guidelines, designed by a physical therapist and yourself,
9 a pediatrician, would make neck manipulation safe, is that
10 correct? That's what the purpose of them was?
11 A Yes. Well --
12 Q Yes or no?
13 A We also --
14 Q Dr. Katz, I'm asking you a question, and I ask
15 that you answer yes or no.
16 A You left out some people who were involved.
17 There were at least --
18 Q I didn't ask you about other people --
19 A No. They were chiropractors. They were
20 chiropractors directly involved in establishing the
21 orthopractic guidelines. Yes. So, if you asked me,
22 chiropractors, physical therapists, myself, yes.
23 Q Okay and that monograph or procedure that
24 relates to the --

1 A These are almost exactly the same as the
2 orthopractic guidelines.
3 Q Orthopractic.
4 A Yeah.
5 Q Those have never been adopted in Canada as a
6 standard of care, have they?
7 A They have.
8 Q That calls for a yes or no answer, Dr. Katz.
9 A It’s an --
10 Q I’m sorry to have to repeat that to you.
11 MR. PATTIS: I’ll object to the badgering.
12 The witness should be permitted to answer.
13 MR. SHAPIRO: Dr. Katz, one thing that may
14 simplify things.
15 THE WITNESS: Yes?
16 MR. SHAPIRO: If you’re unable to answer a
17 question yes or no, if you can indicate so, and, that way,
18 you’ll be allowed to answer.
19 A I cannot answer that yes or no. They have been
20 adopted by the physical therapy profession in Canada and,
21 to some extent, in the states, and one of things they
22 prohibit, by the way, is high velocity, highest neck
23 manipulation with extension or rotation.
24 Q Okay. I want to get to that later.

1 A Sure.
2 Q But they're not prohibiting in any way what a
3 Doctor of Chiropractic would do practicing in Canada, are
4 they?
5 A A Doctor of Chiropractic can practice what he
6 likes.
7 Q Dr. Katz?
8 A Yes.
9 Q Have you had any training as a neurologist?
10 A No.
11 Q Have you had any training in diagnosing a VBA
12 dissection?
13 A Let me just go back to one thing. I did
14 actually take courses in manual therapy on the
15 ceriac(phonetic) model.
16 Q And when was that?
17 A That was around 1978 and I think, again, in '82
18 or so, around that time. I was curious. I don't want to
19 throw the baby out with the bathwater, and I believe that
20 if chiropractors are doing something that is good, I
21 wanted to incorporate it and to work with it, so I did
22 take the ceriac course, who is the founder of manipulation
23 therapy in England, to see what it was all about, so I did
24 do that, as well.

1 To answer your questions, in terms of VBA
2 strokes, I've seen cases, and I have lectured on that
3 material, and I have reviewed --
4 Q Case studies.
5 A -- over 100 legal documents, reviewed the x-
6 rays, reviewed the radiology, offered legal opinions on
7 them with a group of lawyers that are part of our network
8 of Neck 911.
9 Q But you don't practice law, do you?
10 A I don't practice law. I did some mild training,
11 in order to be appointed as the legal agent for the Lana
12 Dale Lewis family, but that was a two-month course, just
13 to know the rules of evidence and hearsay and so on. No,
14 I don't practice law.
15 Q All right, let's get back to that. You did say,
16 though, that you were working with a bunch of lawyers on
17 cases?
18 A Yes.
19 Q And those are malpractice cases?
20 A Yes. When a lawyer writes --
21 Q No, that's all. Thank you. Now you didn't have
22 any training in diagnosing VBA dissection, though?
23 A Well, yes, I did. I'm a physician, and I read
24 x-rays, and I consult with neurologists, and, so, I'm very

1 familiar what the different patterns of dissection are, so
2 I've had no formal experience, but a neurologist doesn't
3 have formal experience in VBAs. He has experience as a
4 general neurologist.
5 Q But you haven't had any formal training in that,
6 have you?
7 A No --
8 Q It calls for a yes or no answer.
9 A No formal recognized certified training, no.
10 Q Thank you.
11 A You're welcome.
12 Q Now have you had training as a scientist?
13 A Yes.
14 Q As opposed to a pediatrician?
15 A Well --
16 Q What training as a scientist have you had?
17 MR. PATTIS: Objection. Foundation. What
18 does that mean?
19 A I'm a physician.
20 Q You're a physician?
21 A Yes.
22 Q Have you had training as a research scientist?
23 A Formal adopted training, no.
24 Q Thank you. Have you had training in

1 epidemiology?
2 A No, but I've reviewed epidemiology -- no.
3 Q That wasn't my question.
4 A No.
5 Q You haven't had any such training?
6 A No.
7 Q No. And, by the way, you said that you spoke
8 with one of Dr. Cassidy's statisticians.
9 A Yes.
10 Q Is that correct? You spoke to that person this
11 week, didn't you?
12 A Well we wanted to get information --
13 Q No. My question is did you or did you not speak
14 to Dr. Cassidy's statistician sometime this week?
15 A I'd like to expand on that answer.
16 Q I'd like you to answer the question.
17 A No. It was about two weeks ago.
18 Q All right.
19 A Before having written to Dr. Cassidy to ask for
20 information, getting no reply, writing to Dr. Liu, getting
21 no reply, writing to Bondy, getting no reply, because we
22 wanted to find out what it was all about, so I did call
23 directly and happened to speak to Eleanor Boyle.
24 Q Did you identify yourself as Dr. Katz, or did

1 you use another pseudonym?
2 A I used Dr. Katz.
3 Q Isn't it true that you identified yourself as a
4 researcher from Yale University when you made that call?
5 A I said that I was preparing a lecture from Yale
6 University and, also, a presentation, yes.
7 Q Right, but that wasn't the purpose of your call.
8 The purpose of your call was to prepare for today's
9 testimony, isn't that true?
10 A No. I lecture in the CME courses at McGill. I
11 gave a lecture on this subject. I'm preparing another
12 lecture on it, which is called Evaluation of Studies,
13 related to incidence reports and risk factors dealing with
14 naturopathy, chiropractic and herbal remedies.
15 Q Thank you. Now what training, if any, have you
16 had in statistics?
17 A No formal training, but a lot of experience with
18 it.
19 Q Thank you. I asked about training, not
20 experience. Thank you. I'd just like to ask you if you
21 could focus on answering my question.
22 A If I could --
23 MR. SHAPIRO: Dr. Katz, there's no question
24 pending right now.

1 A Every physician does take a course in
2 statistics, which I did.
3 MR. SHAPIRO: Dr. Katz, you have to respond
4 only to the questions you're asked.
5 THE WITNESS: Okay. I'm sorry.
6 Q You would agree with me that, in order to be
7 reliable, research should be scientifically based?
8 A Absolutely.
9 Q Surely, you would. And academic integrity is
10 very important?
11 A Yes.
12 Q All right, now, in going about preparing for
13 your testimony today and your position, in which you're
14 urging the Board to mandate informed consent that includes
15 a discussion of the association of stroke or risk of
16 stroke, what is the basis for that opinion, Dr. Katz?
17 A The basis of that opinion is in our submission,
18 document 24. The end of document 24, and this copy is not
19 signed, but it's actually signed by Dr. Wallace Sampson,
20 who is the Director of the Scientific Review of
21 Alternative Medicine, so you have all these studies.
22 Q All right. If you could just indicate? You're
23 at document item number 24?
24 A Twenty-four, yes.

1 Q In your submission?
2 A Yes.
3 Q All right, so, let's let everyone get a chance
4 to turn to item number 24, and then you've referenced to
5 me an article, I believe, of some sort that you've
6 attached?
7 A There's 150 articles.
8 Q Well you said something about a Sampson article.
9 A No. I meant that Wallace Sampson, who was the
10 editor of the Scientific Review of Alternative Medicine,
11 is the signature on the bottom of document 24.
12 Q When I looked at that Sampson piece, which is
13 marked in dark, item number 24, I tried to find out where
14 it was published, and I wasn't able to find it anywhere.
15 Has this piece by Sampson been published anywhere, Dr.
16 Katz?
17 A No.
18 Q All right and --
19 A But all the articles --
20 Q Thank you. Does it have any data, reliable
21 scientific data, that it refers to that we might find to
22 be reliable in determining the issue before the Board?
23 A Yes. The data follows right after the item.
24 Q And what is the data that he references?

1 A He says, "The range of interest in these
2 journals includes neurology, neuro radiology, pathology,
3 forensic sciences, legal publications, family medicine,
4 rehabilitation medicine, ophthalmology, audiology.
5 Numerous prestigious hospitals and universities across the
6 world have reported cases, including the Mayo Clinic, John
7 Hopkins Hospital, the Claude-Bernard Hospital, the
8 Veteran's Administration Medical Center in California.
9 This is being reported from Canada, the Unites States,
10 Denmark, Germany, Italy." And I just have new big one
11 from China, which I called Chaos in the Vertebral Artery
12 in China.
13 Q Which hasn't been submitted?
14 A No.
15 Q All right.
16 A But I have it.
17 Q Right, but it hasn't been pre-filed here?
18 A No, it hasn't.
19 Q So let's leave that out.
20 A But these are all the places that have reported.
21 Q Now of all those articles and newsletters and
22 letters to the editor and journal pieces that you've just
23 recited, how many of them constitute research, primary
24 research with case study and control study?

1 A You know, I was very interested in this,
2 controlled studies. I mean you're not going to do a
3 control, where you're going to take a bunch of people and
4 say, well, these people don't have a tear in their artery.
5 In other words, it's not their fault, and we're going to
6 manipulate their neck, as opposed to these people, who we
7 believe do have a tear.
8 You cannot do such a study. You'd have to
9 -- I don't want to bring up an ugly comment, but one of
10 the chiropractors in one of the websites said, until the -
11 -
12 MS. MOORE LEONHARDT: I would move to
13 strike anything further from this witness, as it's non-
14 responsive.
15 A I'm just saying you cannot to a case control
16 study where you're personally trying to injure one group
17 of people, as opposed to other people. If you look at the
18 --
19 Q All right. Thank you.
20 A Okay.
21 Q If you could please point to any of the
22 articles, references, journal pieces, or letters to the
23 editor, case reviews that you consider to be valid
24 scientific research that supports your position, I would

1 ask you to do so now.
2 A Sure. I will give you three.
3 Q Thank you.
4 A The first one, which we have copies of, is
5 called Vertebral Artery Dissection, Warning Symptoms,
6 Clinical Features and Prognosis in 26 Patients.
7 Q And the author?
8 A The author is Saeed, Shuaib, Sulaiti and Emery,
9 and it was published in Canadian Journal of Neurological
10 Sciences, and it, in fact, identifies --
11 Q All right. Before you go any further, is this a
12 document that was pre-filed?
13 A Yes.
14 Q And where is it in your materials?
15 A Paula, do you have that reference where this was
16 pre-filed? Let me find it. I can find it under the year
17 2000. Under the year 2000. I found it.
18 Q If you could find it in your materials that you
19 pre-filed, so that the Board can follow with us?
20 A In document 45, the year 2000. That's one.
21 There's two others.
22 Q All right. I'm having trouble keeping up with
23 you. It's been a long day.
24 A Sure. Well let me just add, while you're

1 looking, that when Cassidy chose his codes --
2 Q Please. I didn't ask that, Dr. Katz.
3 A No, but this is about the codes.
4 Q Dr. Katz, before we go any further, if we could
5 just get to the article, we'll go from there.
6 A There's three articles. There's this one.
7 There's the one by the Canadian Medical Association
8 Journal.
9 Q And what article is that?
10 A That's the CMAJ article, which is referenced in
11 my submissions, as well.
12 Q And where is that referenced?
13 A I'll find it for you.
14 MS. MOORE LEONHARDT: I'd like to note that
15 the witness is discussing where to find his information
16 from the assistant to Attorney Malcynsky, who is
17 representing VOCA, and I don't believe that there's been
18 any appearance made on behalf of Dr. Katz here, so I would
19 ask that she refrain from assisting the witness, as it's
20 improper.
21 MR. PATTIS: It's not improper.
22 MR. MALCYNSKY: It's called courtesy. If
23 you don't care to afford any of us any, I understand.
24 A I'm going to have to look for that. In the

1 meantime --
2 Q Take your time, and there's no question pending.
3 A Okay.
4 Q Thank you.
5 A In the meantime, I did find the other reference.
6 Q That is?
7 A Which is Complications of Cervical Manipulation
8 Therapy, a Five-Year Retrospective Study in a Single Group
9 Practice.
10 Q And who is the author of that?
11 A That is Malone Baldwin. Let me find these all
12 for you. I did document it in an e-mail, but we've had
13 trouble with our e-mails. I'm sorry. I'm close to
14 finding it for you. The Oklahoma Study is following
15 paragraph 156, and it actually lists the object, the
16 methods and the conclusions in text.
17 Q All right. Is that a peer reviewed study?
18 A The Neurosurgical Focus is, I imagine, a peer
19 reviewed respected journal.
20 Q You're guessing. You're not sure?
21 A You know people always talk about peer review.
22 The trouble with peer review is that chiropractic articles
23 are peer reviewed by other chiropractors. It's a concept,
24 which really we don't pay much attention to.

1 Q What about among pediatricians? Do you publish
2 any articles on the topic of pediatrics, Dr. Katz?
3 A Just let me find the CMAJ reference.
4 Q Could you please answer my question?
5 MR. PATTIS: I'm going to object. He --
6 A -- 172 is where the CMAJ article is.
7 Q Thank you, but I'd like to take you back to this
8 statement that you just made about chiropractors.
9 MR. PATTIS: I'd like a ruling on my
10 objection. I don't know whether he's been given an
11 opportunity to find all the --
12 MS. MOORE LEONHARDT: I would ask --
13 MR. SHAPIRO: Attorney Moore Leonhardt, I
14 want to take one thing at a time. You've asked him to
15 identify where certain articles are in his pre-filed
16 testimony. I don't want to move on until he's either
17 identified them --
18 A The last article is in paragraph 213. It's the
19 Holderman Study, where 75 percent of the strokes happened
20 within 30 minutes.
21 Q Thank you for that. Now let's just have an
22 understanding here.
23 A Sure.
24 Q I will ask you a question.

1 A Yes.
2 MR. PATTIS: Objection. Badgering the
3 witness.
4 MS. MOORE LEONHARDT: I'm not badgering the
5 witness.
6 MR. PATTIS: The Board will control this.
7 Can we have another question? I have an objection.
8 Q Do you understand that if I ask you a question
9 that calls for a yes or no answer, that's the only answer
10 that you should give me, Dr. Katz?
11 MR. PATTIS: Objection, badgering.
12 MR. SHAPIRO: I would recommend overruling
13 the objection.
14 COURT REPORTER: One second.
15 Q Dr. Katz?
16 A Yes.
17 Q If you have difficulty answering a question that
18 I put to you that calls for a yes or no answer, would you
19 be willing to let me know that?
20 A I certainly will.
21 Q All right and, otherwise, if you don't have a
22 problem answering the question, would you agree to give me
23 a yes or no answer to a question put to you?
24 A I will. I will.

1 Q Thank you. We can get through this much more
2 quickly if you'll do so. Thank you. Now, as I understand
3 it, the basis for your opinion that you have presented to
4 the Board today rests on the Shuaib article, the CMAJ
5 article at 17, the Oklahoma article referenced at 156, the
6 Malone Baldwin article, and I haven't found a reference
7 for that, or is that 213?
8 A The Malone? That's 213.
9 Q Okay.
10 A No, that's not.
11 Q Holderman is 213.
12 A The Oklahoma, yeah.
13 Q So have you found the Malone Baldwin one?
14 A Yes. I just mentioned to you before that there
15 was the whole abstract there, as well.
16 Q All right and then, beyond that, did you also
17 rely on the German study? I did note that you reference
18 that in your notes along the way, your submission that is.
19 A I cannot give a yes or no answer. I did rely on
20 the German study, but I'm well aware that it involved
21 people other than chiropractors doing the neck
22 manipulations.
23 Q But it did inform your opinion at some point?
24 A Yes, because the title was chiropractic, but it

1 was misleading to some extent, yes.
2 Q Okay, now, how do you go about evaluating
3 articles that speak on the topic of chiropractic care and
4 neck manipulation?
5 A You mean the good and the bad?
6 Q Yes. How do you cherry pick, if you will, the
7 articles that you prefer and discard others?
8 A The good is from -- quite frankly, I don't see
9 many published articles dealing -- I've never seen one in
10 the chiropractic literature, but I'm not familiar with the
11 chiropractic literature, detailing that flexion
12 manipulation is helpful, but I'm sure it's there. I'm
13 sure it's there.
14 MS. MOORE LEONHARDT: I move to strike.
15 That's not responsive.
16 Q My question, Dr. Katz, was how do you make a
17 decision about which journal articles to accept and which
18 ones to reject when you're searching for literature that
19 relates to the topic of chiropractic care and neck
20 manipulation and stroke?
21 A By my seeking advice from chiropractors and
22 neurologists and neurosurgeons and other people. Director
23 John Richardson is Director of Pathology at the Montreal
24 Neurological Institute has been a very big help for me.

1 In that regard, he also testified at the Lana Dale Lewis
2 Inquest, and my training as a scientific physician in
3 looking them all over.
4 Q All right and your training as a scientific
5 physician is what, Dr. Katz?
6 A Four years of medical school and two years of
7 residency and practicing with a standard that has left me
8 never to have been sued, never to have been disciplined by
9 the colleges of which I'm a member in 35 years.
10 Q So then I take it you don't apply evaluative
11 tools, such as assessing methodology appropriateness, risk
12 ratios and the reliability of the data that's reported on
13 in the journal articles that you're reviewing?
14 A I do.
15 Q How do you do that if you haven't had training
16 in that background?
17 A Well I consulted with a statistician, several
18 statisticians. I worked very closely with an
19 epidemiologist. I went over all the Cassidy reports. I
20 have detailed comments on the statistics, one of which I
21 mentioned was leaving out that first day, where 75 percent
22 of strokes are happening, so they're not being reported,
23 and I think that was a crucial error in that study.
24 Q Well I haven't gotten to that study yet.

1 A Okay.
2 Q So we're getting a little ahead of ourselves.
3 MR. PATTIS: Objection. Objection --
4 A I meet with statisticians and epidemiologists
5 and stroke experts, and we evaluate that.
6 Q Okay. Have you had any training in diagnosing
7 VAB dissections?
8 MR. PATTIS: Asked and answered about 20
9 minutes ago.
10 Q VBA. I'm sorry.
11 A Only --
12 MR. PATTIS: I'd ask for a ruling.
13 MR. SHAPIRO: Okay. I would recommend that
14 the objection be sustained. I think it's been asked and
15 answered.
16 MS. MOORE LEONHARDT: Okay.
17 Q Now, Dr. Katz, you keep bringing up this Lewis
18 Inquest, and I don't want to take us too far a field here,
19 but you seem to be looking to pull that into this hearing
20 to a degree, because you've mentioned it in your
21 submission several times.
22 A Um-hum.
23 Q Isn't it true that you were removed from that
24 case?

1 A That’s true, yes.
2 Q Yes. And why were you removed, Dr. Katz?
3 A I was removed --
4 MR. PATTIS: Foundation. We don’t know
5 what the case is.
6 A This was the inquest into the death of Lana Dale
7 Lewis.
8 Q Thank you. And you were acting in the capacity
9 as legal advocate for the family in that case?
10 A I was.
11 Q Is that right?
12 A Yes.
13 Q And you had no legal training, though, I take
14 it?
15 A Except for the two-month course on rules of
16 evidence and hearsay.
17 Q Right, and, ultimately, you were asked to remove
18 yourself from the inquest, were you not?
19 A That is correct. It’s part of my affidavit, as
20 to why.
21 Q I’m not interested in your affidavit.
22 MR. PATTIS: Move to strike the gratuitous
23 comment.
24 Q Isn’t it true --

1 MR. PATTIS: I move to strike that comment
2 and ask that counsel be admonished.
3 MR. SHAPIRO: Okay. Attorney Moore
4 Leonhardt and all counsel, we're not going to make
5 comments on responses to questions.
6 Q How often do you act as a consumer advocate or
7 plaintiff agent in legal proceedings, Dr. Katz?
8 A I don't. I stopped.
9 Q You did do it in the Lewis case, though?
10 A In the Lewis case --
11 Q That calls for a yes or no answer. I'm sorry.
12 A Yes.
13 Q All right and were you paid for your role there?
14 A No.
15 Q And you were asked to remove yourself after you
16 wrote a threatening letter to Dr. Murray Naiberg, were you
17 not?
18 A No. That's not entirely correct, which is part
19 of my affidavit.
20 Q Who was Dr. Naiberg?
21 A Dr. Murray Naiberg came up to me -- when I was
22 at the --
23 Q No. I just asked you who he was.
24 A He was the coroner --

1 Q He was the coroner. And you wrote a letter to
2 Dr. Naiberg, criticizing his actions with regard to the
3 autopsy and the inquest, his role in the inquest, did you
4 not?
5 A No. The chiropractors stole from my office --
6 Q I'm asking about a letter with Dr. Naiberg and
7 you and not what chiropractors might have done.
8 A Well --
9 Q Did you or did you not write a threatening
10 letter to Dr. Murray Naiberg?
11 MR. MALCYNSKY: Objection --
12 A The letter you have was an unsigned letter,
13 stolen from my office, and Dr. Naiberg said so in his
14 affidavit.
15 Q Okay.
16 A So they came into my office, stole my letter --
17 Q Dr. Katz, please.
18 A All right. Well how reliable is an unsigned,
19 stolen letter?
20 Q I would like to stay on track here. Now you've
21 also acted, you said in your materials and it's on the
22 first page, that you were an expert witness at the inquest
23 into the death of Laurie Jean Mathiason, did you not?
24 A That's right.

1 Q All right and were you paid as an expert witness
2 in that case?
3 A By the coroner, yes.
4 Q You were paid by the coroner?
5 A Yes.
6 Q So you were actually acting as the coroner's
7 expert witness, I take it?
8 A Well I thought at the time I was. The coroner
9 did pay for me, did invite me, asked me to be an expert
10 witness. He said that, as an expert, I could sit in the
11 court and listen to other people's testimony.
12 Subsequent to that, the chiropractors wrote
13 a letter to the coroner, which I never saw and never knew
14 about, and, subsequent to that, the coroner wrote me that
15 I was not his witness. I was a Mathiason witness. I'm
16 not going to argue with the man. He died shortly after,
17 and, so, I didn't even bother writing back to him, and I
18 dropped the issue.
19 Q Isn't it true that the coroner wrote you a
20 letter and was upset with the fact that you had been
21 identifying yourself as the coroner's expert witness at
22 the Mathiason inquest?
23 MR. SHAPIRO: Attorney Moore Leonhardt, can
24 you explain to the Board the relevancy of this line of

1 questions?

2 MS. MOORE LEONHARDT: It goes to the

3 witness's credibility, and the Board is sitting in the

4 position of judge and jury and is empowered and shall, in

5 the course of its deliberations, make determinations of

6 credibility of each and every witness that has appeared

7 before it on this issue in the Declaratory Ruling.

8 This goes to Dr. Katz's veracity, integrity

9 and reliability, or lack thereof, as a witness, and I do

10 have a letter that I'd like to show the witness.

11 A I'm familiar with the letter, and let me say

12 that I did not see the letter, which they --

13 MR. SHAPIRO: Dr. Katz, right now, there's

14 no question pending.

15 THE WITNESS: All right.

16 MR. SHAPIRO: She's going to show you the

17 letter and ask you a question.

18 THE WITNESS: Sure. We never followed up

19 on the doctor who supposedly --

20 MR. SHAPIRO: Dr. Katz?

21 THE WITNESS: I'm sorry. Go ahead.

22 MR. SHAPIRO: I'm not going to allow you to

23 filibuster.

24 THE WITNESS: I'm sorry.

1 MR. SHAPIRO: You're a witness, and you're
2 being subject to Cross-Examination, so you can respond
3 when a question is asked of you.
4 THE WITNESS: I understand.
5 Q Have you had a chance to look at the letter, Dr.
6 Katz?
7 A I'm very familiar with the letter.
8 Q All right. What do you recognize the letter to
9 be?
10 A It's a letter from John Nyssen, Chief Coroner of
11 the Province of Saskatchewan.
12 Q And it's addressed to you?
13 A Yes.
14 Q Dated June 28, 2000?
15 A Yes.
16 Q Was this letter sent to you during the period of
17 time that you were acting as an expert witness in the
18 Mathiason case?
19 A No. This was sent after, two years after.
20 Q Two years after. And why did you receive this
21 letter from John Nyssen two years after that inquest, if
22 you know?
23 MR. PATTIS: Objection, speculation.
24 A I --

1 MR. PATTIS: Objection.
2 A I don't know --
3 MR. SHAPIRO: I would recommend --
4 A I don't --
5 MR. SHAPIRO: Dr. Katz?
6 A I don't know why.
7 MR. SHAPIRO: Dr. Katz?
8 THE WITNESS: I'm sorry.
9 MR. SHAPIRO: I'm making a recommendation
10 to the Board regarding an objection.
11 THE WITNESS: I'm sorry.
12 MR. SHAPIRO: Okay. I would recommend that
13 the objection be overruled, and Dr. Katz, if he knows, can
14 answer the question. Attorney Moore Leonhardt, can you
15 ask the question again?
16 Q Do you know why the Chief Coroner for the
17 Province of Saskatchewan sent you this letter, Dr. Katz?
18 A I don't know why, because I don't know what Tim
19 Danson wrote to the coroner to provoke this letter.
20 Q So your answer is you don't know why?
21 A No.
22 Q Would you please read the letter?
23 A Well --
24 Q Isn't it true that Dr. Nyssen, the Chief

1 Coroner, sent you a letter and said, "I have become aware
2 that you have referred to yourself" --
3 MR. PATTIS: Objection, hearsay, reading
4 from a document that's not in evidence.
5 MR. SHAPIRO: I agree with that.
6 MS. MOORE LEONHARDT: All right. I'll
7 offer the letter.
8 MR. PATTIS: It's still hearsay.
9 A Yes, I did refer to myself --
10 MR. PATTIS: Objection. I'd ask for a
11 ruling.
12 MR. SHAPIRO: The objection is to the
13 document is hearsay?
14 MR. PATTIS: Yes, sir.
15 MR. SHAPIRO: I would recommend overruling
16 the objection.
17 MS. MOORE LEONHARDT: Thank you. We've had
18 an awful lot of documents brought into this hearing. I
19 appreciate your ruling.
20 A Yeah, I'd just like to deal with submission, but
21 go ahead.
22 Q Dr. Katz --
23 MR. SHAPIRO: If you offer the document, I
24 need to mark it. The Board can take this document if it

1 wants for whatever weight it deems appropriate. Okay.
2 This document will be marked as Exhibit 74.
3 (Whereupon, the above-mentioned document
4 was marked as Exhibit No. 74.)
5 MR. SHAPIRO: You can continue, Attorney
6 Moore Leonhardt.
7 MS. MOORE LEONHARDT: Thank you.
8 Q Now have you also, in your role as advocate,
9 worked with the recent class action involving the --
10 A If you don't mind, I would like to tell you that
11 this piece of evidence was removed by the chiropractor
12 lawyers, themselves.
13 Q There's no question pending, Dr. Katz.
14 A Okay. Go ahead.
15 Q Thank you.
16 A Yes. Go ahead.
17 Q In your role as advocate, have you also been
18 involved with the recent class action that was pending in
19 Alberta?
20 A Yes.
21 Q And what was your role there?
22 A I helped put together some of the documentation
23 for the legal counsel. I went to Alberta and sat at Sandy
24 --

1 MR. SHAPIRO: Excuse me, Dr. Katz.
2 Attorney Moore Leonhardt, can you make some offer of
3 proof, as to why this is relevant for the Board, in terms
4 of his involvement with the class action?
5 MS. MOORE LEONHARDT: Yeah.
6 MR. SHAPIRO: And what the class action
7 lawsuit is?
8 MS. MOORE LEONHARDT: I'm just exploring
9 his background and his involvement on the issue, laying a
10 foundation for his testimony with regard to informed
11 consent, and he does refer to these various roles that he
12 takes on throughout his submission, and I'm just heading
13 into the submission.
14 A I met Sandy Nette, you can see her picture in
15 document 31, and you can see her picture that happened
16 immediately after a stroke manipulation when she was told
17 to drive home when she was feeling nauseous and threw up
18 and almost drove off the highway, where she was found
19 convulsing, so I helped Sandy Nette, I met with her, I
20 spoke with her, I spoke with her clinical neurologist, and
21 I'm glad to say the Nettes are watching these proceedings
22 with great interest, and that's about it.
23 Q Well I was interested in the role with regard to
24 the class action suit. Now the class action suit was a

1 class action litigation brought against a number of
2 persons and entities.
3 A Yes.
4 Q And do you recall who the claim was brought
5 against, Dr. Katz?
6 A Yes. It was brought against the Ministry of
7 Health, and it was brought against the Regulatory Body of
8 Chiropractors, and it was brought against Styles, who
9 happened to be actually a spokesperson for the Regulatory
10 Body in all their public advertisements.
11 Q When you say “Regulatory Body,” is this the
12 regulatory board that regulates chiropractors in Canada?
13 A Licensing Board, yes.
14 Q The Licensing Board?
15 A That’s right.
16 Q I see. And this was in Alberta?
17 A Yes.
18 Q And, as I understand it, the action was
19 primarily based on what one might call a malpractice
20 action against a chiropractor?
21 A Yes.
22 Q And you were also supporting claims against the
23 Licensing Board and Her Majesty, the Queen, in Right of
24 Alberta, as co-defendants in that case?

1 A Yes.
2 Q And isn't it true that the lawsuit has been
3 thrown out now?
4 A The lawsuit --
5 Q It calls for a yes or no answer.
6 A No, not --
7 Q It's been dismissed, hasn't it?
8 A Two of them have been dismissed, not the third.
9 Q And what's pending now, Dr. Katz?
10 A What's pending now is the lawsuit against the
11 chiropractor.
12 Q And you're still working with the family against
13 the chiropractor I take it?
14 A I haven't been asked for any help in the last
15 six months, but, if I'm asked, I will certainly help.
16 Q So you're no longer involved?
17 A No. I am involved if I'm asked for further
18 help.
19 Q All right, now, let me ask you. You talked
20 about a monograph and this scientific standard.
21 A Yes.
22 Q Did you once develop one in June of 2008, called
23 the Laurie Jean Mathiason Scientific Standard?
24 A Yes.

1 Q And who established the scientific standard
2 that's contained in that document?
3 A A group of us. In the Neck 911 Network, there
4 are philosophers, there's epidemiologists, there's
5 victims' families, there's neurologists, there's
6 pathologists, and we all get together and we say how can
7 we assure that we don't throw the baby out with the
8 bathwater? How can we assure that the good, which
9 chiropractors do, which we recognize, in treating neck
10 pain can be sustained and not thrown out with the
11 bathwater?
12 How can we apply the same level playing
13 field that physicians have that chiropractors have? And
14 what we said is that, if there's 50 million neck
15 manipulations going on, perhaps there need be only one
16 million, or perhaps there need only be 500,000 involving
17 the highest neck, because highest neck is an anatomical
18 difference than the lower neck, in terms of problems, so -
19 -
20 Q Okay. We're going to get into highest neck
21 later.
22 A So we developed --
23 Q You've answered my question. Thank you.
24 A No. So we --

1 Q So there's a group of you that developed a
2 scientific standard, as you call it?
3 A Yes, including someone from Yale University in
4 Connecticut.
5 Q Has this been peer reviewed?
6 A I don't know what the word peer review means. I
7 can tell you that --
8 Q And, so, your answer is no?
9 A I don't know how to answer that question.
10 Q Okay, but you recall the document to which I'm
11 referring?
12 A Yes.
13 Q And this document was presented to the Ministers
14 of Health and the members of the Legislative Assemblies in
15 the Provinces of British Columbia, Alberta, Saskatchewan -
16 - I'm sorry. I stumble over this word.
17 A Ontario.
18 Q And Manitoba?
19 A Yes.
20 Q And did you participate in writing this
21 document, Dr. Katz?
22 A Yes.
23 Q Now I've heard you say a couple of times in your
24 remarks today, your testimony, that you have respect for

1 chiropractic?
2 A Yes. Some of them, yes.
3 Q All right.
4 A Absolutely.
5 Q Do you agree with this statement? "Young
6 healthy people, mostly women, are unnecessarily suffering
7 disabling cerebral strokes or dying. This is due to more
8 than a century-old false beliefs of a grosser(phonetic)
9 and mystic, that manipulating the highest neck area is a
10 cure all for disease. This quackery is taught today in
11 every school of chiropractic, is practiced by all or most
12 all chiropractors, and, worst of all, is fully supported
13 by the chiropractic regulatory bodies that have failed in
14 their primary duty to protect the public."
15 Do you agree with that statement, Dr. Katz?
16 A Yes.
17 Q Did you write that statement?
18 A Probably, to some extent. We're a group. I
19 have textbook from --
20 Q You answered my question. Thank you.
21 A It's part of my pre-filed testimony.
22 Q You believe that you probably wrote that
23 statement?
24 A Yes.

1 Q Thank you. You testified before in New Zealand
2 quite awhile ago, did you not?
3 A Yes, I did.
4 Q And were you accused of making false statements
5 in New Zealand?
6 A I was.
7 Q And the New Zealand report stated that you --
8 MR. PATTIS: Foundation. The New Zealand
9 report? Foundation.
10 Q As part of your experience in your interest in
11 the issue of chiropractic neck care and stroke, you've
12 been involved with a study in New Zealand, correct?
13 A Yes.
14 Q What was that study?
15 A I was invited by the New Zealand Consumer's
16 Association, the same thing as Consumer Reports here, and
17 I happen to have been President of the National
18 Association of the Consumer Association of Canada's Health
19 Committee for three years and brought in legislation and
20 helped on car seat safety, drug prescriptions and so on.
21 I was invited by them to present a paper in
22 New Zealand, which I did, and it's all part of my -- and I
23 put in my CV that I had worked for the Ontario Ministry of
24 Health, which I had and was paid for and personally hired

1 by the Minister of Health.
2 I wrote in my CV that I had worked with the
3 Manitoba Health Services Commission, which I had and was
4 personally paid for, and, as part of my affidavit, which
5 if you want to go down this road, I think we have to put
6 the affidavit into evidence at one point, because the
7 chiropractors admitted themselves with the affidavit that
8 all of this was wrong.
9 The chiropractor, instead of examining me
10 on the substance of what I wrote, said he had a letter
11 from Manitoba that I had never worked for them, someone I
12 never met and never knew, which the Manitoba government
13 subsequently apologized to me for, and the same thing with
14 Ontario, that they produced a letter from someone I never
15 met and never knew.
16 And, so, the Commissioner, who was quite
17 pro chiropractic, and that was evaluated by Dr. William
18 Jarvis(phonetic) of California, commenting on the
19 Commission, said, well, I lied, but he was wrong.
20 Q Well you had never been a consultant to the
21 Manitoba government or its Health Service Commission, had
22 you?
23 A That’s false. I have absolutely been. I was
24 paid for them, I was flown out to Manitoba, and the head

1 of the Commission wrote me a letter, saying that he
2 disagreed with what was said and I was right.
3 Q All right. The Executive Director of the
4 Manitoba Health Services Commission categorically denied
5 your statement, did he not?
6 A No, he didn't. You have the wrong person. Is
7 that Crawford?
8 Q Did he not say Dr. Katz has not now and has
9 never been a consultant to that government?
10 A That's a letter by Crawford, someone I never met
11 and never knew, and it was overruled by the person who
12 actually hired me.
13 Q Okay.
14 A And I have that letter, if you'd like. I don't
15 have it here, but I will be glad to submit it.
16 Q Your testimony is sufficient for my purposes,
17 Dr. Katz.
18 A Thank you.
19 Q Getting into your submission, the submission was
20 developed to respond to the question before the Board on
21 informed consent?
22 A Yes.
23 Q And I take it you have a lot of experience with
24 informed consent as a practicing pediatrician, do you not?

1 A Yes. Pediatric Practitioner, yes.
2 Q And you secure informed consent through a
3 process that would involve at least one parent or a
4 guardian of a child that you might be caring for, is that
5 correct?
6 A Yeah. The informed consent I predominantly
7 worked with is of two natures. One is that the medical
8 informed consent is the product monograph given to every
9 patient, like Ritalin is the example. There's over 22,000
10 medications that I can prescribe, all of which say what
11 the indications, contraindications, side effects and
12 warnings are, so that's the official informed consent.
13 In Canada, it's pretty routinely given by
14 the pharmacist to every patient, and the other informed
15 consent are for a surgical procedure, which I might
16 undertake, which are personally given to the patient,
17 explaining all the risks in a two-page document and signed
18 by the patient.
19 Q All right. The first one relates to drug
20 therapy?
21 A Yes.
22 Q And the pharmacist gives it to the patient?
23 A Yes.
24 Q And you don't have a direct involvement with

1 that?

2 A Well I do, because people call me after reading

3 the procedure monograph and say, hey, my child has a rash.

4 Do you think it's due to this? It says over here.

5 Q But that's after they've already taken the drug?

6 A Well, yes, but that's very important, because

7 that's the discharge summary we're talking about.

8 Q No. No. My question asked for a yes or no

9 answer, so, as I understand it --

10 A I can't answer that yes or no.

11 Q -- you write a prescription to a patient,

12 correct?

13 A Yes.

14 Q And then the patient takes the prescription to

15 the pharmacist and gets it filled, correct?

16 A Yes.

17 Q And the pharmacist gives the patient a monograph

18 about that particular drug, correct?

19 A That's right. I might give some myself, too,

20 sometimes, yes.

21 Q All right, but maybe not?

22 A It's pretty well routine, and everybody looks up

23 on the internet anyways, but yes.

24 Q All right, so, more often than not, it's the

1 pharmacist that gives the monograph on the drug to the
2 patient?
3 A Yes, and I am then the --
4 Q Thank you.
5 A -- discharge summary of the questions that
6 follow.
7 Q But do all of the patients have questions, or
8 their representatives, call you with a question each time
9 you write a prescription and that prescription gets
10 filled?
11 A No, not every time.
12 Q No. So there are many times that the patient's
13 representative would receive the monograph and never call
14 you and ask about it?
15 A Yes.
16 Q Got it.
17 A Unless they had a discharge warning of something
18 about to happen.
19 Q All right.
20 A A child has a rash, whatever.
21 Q So what happens in the case of prescribing an
22 antibiotic, for example, for an infant?
23 A Yes.
24 Q I would imagine you do that on a fairly often

1 basis, is that correct?

2 A Almost never on children that are nine months of

3 age.

4 Q Until they're about nine months of age?

5 A Yeah --

6 Q And then, after that, in connection with various

7 maladies they may have, you might write a prescription?

8 A The most common one, and I, myself, and Dr.

9 Schlosser(phonetic), Chief of Ear, Nose and Throat, we

10 published, I wrote with him what's called the Emily

11 Method, which is named after my daughter, yes, ear

12 infections.

13 Q You prescribe antibiotics for ear infections?

14 A Not always. It depends. The point of the book

15 we wrote, called the Emily Method, was to try to --

16 Q I'm going to stop you there. I don't want to

17 know about your book. I just want to know if you --

18 A No. It was trying to say prescribe less often

19 if you don't see these signs.

20 Q Okay.

21 A So we try to reduce the --

22 Q Okay and you write antibiotic prescriptions for

23 other conditions in children in the course of your

24 clinical practice, do you not?

1 A Yes. Absolutely.
2 Q Are you aware of the risk of asthma that's been
3 associated with antibiotic prescription in children?
4 A I'm not aware of a particular study with asthma
5 and antibiotics in children, no.
6 Q All right, so, you don't warn the parents about
7 the association that's been reported in the literature
8 between antibiotic use in children and the development of
9 asthma?
10 MR. PATTIS: Assuming a fact not in
11 evidence.
12 A I'm not aware of any study showing that if you
13 take an antibiotic, you're more likely to have asthma.
14 Q All right, so, it's --
15 A If I was, I would certainly tell them.
16 Q All right, but you're not aware of it?
17 A No. As I am a teacher and I have --
18 MR. SHAPIRO: Counsel, I would suggest that
19 you move on.
20 MS. MOORE LEONHARDT: I'm trying to move
21 on, but the witness has answered my question and
22 continuing to speak.
23 THE WITNESS: Okay.
24 MS. MOORE LEONHARDT: Thank you.

1 THE WITNESS: You’re welcome.
2 Q Now another area that you would get informed
3 consent from your patients through their representatives,
4 if you will, you mentioned was surgery. Do you recall
5 that testimony?
6 A Yes.
7 Q All right. What type of surgery do you perform,
8 Dr. Katz, in your practice?
9 A There’s I would say three main types. One is
10 circumcisions, the second one is I was actually one of the
11 first physicians to use -- to do suturing using
12 hyseracquil(phonetic) glue, so I developed that technique,
13 and I do a lot of that.
14 I do minor procedures for skin lesions,
15 removing skin lesions from children’s skin. That, I would
16 say, would be the three main ones.
17 Q All right and you’ve been performing the
18 circumcisions for many, many, many years on children, have
19 you not?
20 A I started about --
21 DR. POWERS: Excuse me, Dr. Katz.
22 THE WITNESS: Yes.
23 DR. POWERS: Hang on one second. We got to
24 get back to --

1 MS. MOORE LEONHARDT: I'm going into --
2 DR. POWERS: I know, but circumcisions, as
3 Jewish as I am, I'm just having a hard time tying how this
4 can have anything to do with the one question we have.
5 MR. PATTIS: I agree, Doctor. It is a
6 painful topic. Can we move on?
7 MS. MOORE LEONHARDT: Dr. Powers, I'm
8 trying to lay a foundation with regard to how he discusses
9 informed consent and what he incorporates in that and what
10 he considers to be material in the discussion with the
11 representatives of those patients.
12 DR. POWERS: Okay, but --
13 MS. MOORE LEONHARDT: So I'm laying a
14 foundation.
15 DR. POWERS: The only thing I suggest is
16 maybe we can get there quicker than you're doing it.
17 MS. MOORE LEONHARDT: Sure.
18 A Every patient who comes to a surgeon's or to my
19 office is given a two-page printout, plus a consent form,
20 and the printout lists all the things that can go wrong,
21 bleeding, infection and so on, and has my personal home
22 phone number, and every patient over three months of age
23 has my personal cell phone number to call me at any time.
24 Q Okay, now, when you're -- if you could please

1 describe for the Board and me, so I understand it, how
2 you, as a physician in Canada, engage in the informed
3 consent process, because we're here in the United States,
4 and I'm just curious to know whether your informed consent
5 process, which has obviously informed your views here
6 today, has any similarity to the informed consent process
7 that the Board is aware of.
8 A Sure. The College of Physicians and Surgeons of
9 Quebec, and I actually worked for them for three years at
10 one point, has very specific, as does the Ontario College,
11 guidelines, as to what a physician is supposed to make the
12 patient aware of as what might happen.
13 And, so, if I fall below those guidelines,
14 which I never have, then I could be disciplined for that,
15 so they say, look, if you're going to give an antibiotic
16 to a child, they have to be aware they can have an
17 allergic reaction, they have to be aware that they can
18 contact you or the pharmacist to deal with that, so the
19 Board, itself, sets guidelines in disciplinary actions, as
20 to what you're supposed to tell the patient.
21 For the circumcisions, I have to have a
22 signed signature. I have to warn them about four specific
23 events that can occur, which are laid out clearly.
24 Q What are those four events?

1 A Bleeding, which is the most important event, an
2 infection after the procedure is done, adhesions, which
3 can develop later on, and any type of complication, like
4 amputation or stuff like that that happens later on.
5 Q Okay, so, you're telling me that --
6 MR. PATTIS: I'm begging this. Can we move
7 on, please? Can we circumscribe the discussion of
8 amputation incident to circumcision, please? This is too
9 much.
10 Q Are you aware that in the United States there's
11 a reported risk of death in circumcisions of one in
12 500,000?
13 A No.
14 Q All right and do you know what the risk of death
15 is in Canada with regard to circumcisions that are
16 performed on children?
17 A I do know that there was a death reported by the
18 coroner three years ago using the plasti-bell, and I don't
19 use it. I stopped using it 15 years ago, and I've had no
20 deaths.
21 Q And have there been other deaths that have been
22 reported over the years connected with circumcision?
23 A There was one death that I'm aware of in
24 Vancouver, where a child bled to death, yes.

1 Q All right. The child bled to death?
2 A Yes.
3 Q And that's a catastrophic event, wouldn't you
4 agree?
5 A Absolutely.
6 Q The loss of a child is a tragedy?
7 A I think, for a minor procedure, an elective
8 procedure, it is extremely unfortunate. That being said -
9 -
10 Q No. Thank you.
11 A Let me just clarify, if I can, because 94
12 percent of all urinary tract infections in boys and one
13 out of every six hospital admissions at a hospital is for
14 urinary tract infection in a boy who is not circumcised,
15 so we're preventing 94 percent of admissions to hospital
16 of babies in the first three months by circumcising them.
17 That being said, I'm neither for nor
18 against.
19 Q And, so, the risk of death in that instance
20 would be extremely rare, wouldn't you agree?
21 A I would hope so and I think so, but I don't know
22 for sure.
23 Q It's extremely rare?
24 A Yes.

1 Q And, certainly, there's an association between
2 the risk of death -- I'm sorry. Between the circumcision
3 procedure and the tragic death that you've --
4 A That is why every patient has my personal cell
5 phone number to call me any time.
6 Q But you don't, in the informed consent process,
7 discuss with the representatives of those children the
8 remote, extremely rare possibility of death, do you?
9 A Death is not mentioned.
10 Q And it's not mentioned in your monograph either,
11 is it?
12 A It's not mentioned.
13 Q Thank you.
14 CHAIRMAN SCOTT: At this point, we're going
15 to take a five-minute break.
16 MS. MOORE LEONHARDT: Okay.
17 CHAIRMAN SCOTT: And just five. Thank you.
18 (Off the record)
19 Q Dr. Katz, are you with us? All set? Okay.
20 From time-to-time you testify you reach out to people in
21 the medical community, and that includes chiropractors, as
22 well as orthopedic doctors I take it?
23 A Yes.
24 Q And, in fact, you've reached out to the

1 statistician of Dr. Cassidy's recently to get some answers
2 to your questions, correct?
3 A Yes.
4 Q And, also, from time-to-time, haven't you e-
5 mailed Dr. Pearl, who is here as a rebuttal witness, to
6 comment on or talk about matters related to chiropractic
7 medicine?
8 A Dr. Pearl was e-mailed by a chiropractor
9 colleague of mine, or friend of mine.
10 Q All right. Have you e-mailed Dr. Pearl?
11 A I have asked Kyle Klyn, which is a chiropractor,
12 to help in suggesting questions to various people, and, on
13 his behalf, I e-mailed Dr. Pearl, as did Dr. Klyn.
14 Q Okay and you haven't had any difficulty
15 referring to Steven Pearl as Dr. Pearl, have you?
16 A I --
17 MR. SHAPIRO: Counsel --
18 A -- but I'm not going to --
19 MR. SHAPIRO: Dr. Katz? Counsel, I want
20 some relevance to the question, because the Board wants to
21 move on and get to some substantive issues, not with
22 respect to whether doctors are a friend to another
23 doctor's doctor. It's really far beyond the scope here.
24 MS. MOORE LEONHARDT: That's fine.

1 Q Were you involved with the effort to block a
2 College of Chiropractic Medicine at Florida State
3 University?
4 A Yes.
5 Q A few years ago? Thank you. Dr. Katz, have you
6 published any scientific literature in any scientific
7 journal?
8 A No. The only article I published was published
9 in the Scientific Review of Alternative Medicine, which I
10 have a copy of here.
11 Q And what was that article?
12 A That was an article by myself and Dr. Jay
13 William Kinsinger on the events that took place at Florida
14 State University.
15 Q Thank you. Now, as I understood your testimony
16 earlier, when you were criticizing Dr. Cassidy's report,
17 you were of the belief that you don't think that using
18 control groups is an important tool to use in conducting
19 the type of study that Dr. Cassidy conducted?
20 A It's important in his group, yes. The answer is
21 it's important in his group.
22 Q Now of the studies that you've relied on with
23 your testimony here today and you gave me a list of those,
24 how many of those studies included the use of a control

1 group?
2 A I think these are not statistical studies, so I
3 don't think there was any control group. There were
4 clinical studies.
5 Q These were case reports, or case reviews, if you
6 will?
7 A They were reports based on a person being
8 admitted to hospital, having an examination done, a
9 neurological radiological examination done, a diagnosis
10 made.
11 Q They were case reviews, then, I take it?
12 A There was also the --
13 Q Is that your answer, yes?
14 A Somewhere, there was one that was not that I
15 refer to, and that was the study by Scott Holderman,
16 Chiropractor Holderman, on 64 medical legal cases that he
17 testified at.
18 Q All right and that was the only one that had a
19 control group with it?
20 A You could say, to some extent, that the article
21 I submitted to you by Kotchuck(phonetic) on the canine
22 study did have a control group, but they didn't follow
23 through on it.
24 Q All right. Do you find that there's useful

1 information in Dr. Kotchuck's report that informs your
2 opinion?
3 A The Kotchuck Study, no.
4 Q All right, thank you. Now is it your belief
5 that you can calculate risk without a control group?
6 A I think that, in certain circumstances, you
7 can't have a control group, but you still can understand
8 risk.
9 Q That's not my question. Is it your testimony
10 that you can calculate risk if you don't have a control
11 group?
12 A Yes. Yes.
13 Q And how would you go about doing that?
14 A Well, if you look at the studies I presented to
15 you, a patient, by history and by examination and by
16 radiological study in an actual case in a very timed and
17 clear sequence, gives you that information.
18 Q But that's a temporal association of the actual
19 outcome in connection with the event or the treatment, is
20 it not?
21 A It's a very close causal temporal relationship,
22 yes.
23 Q It's a temporal association, as opposed to a
24 causal relationship, is it not?

1 A No. It's a causal one, too.
2 Q What is the difference between a temporal
3 association and a causal relationship?
4 A Because if someone has a neck manipulation and
5 develops immediate symptoms, whatever other causes there
6 might be, perhaps some intimal dissection, which we've
7 never really known about. There's two causes. There's
8 the intimal dissection, if that exists. We have a lot of
9 doubt about that, or one that proceeds to a dissection
10 spontaneously. As the CMAJ article said, we doubt that
11 such spontaneous dissections occur.
12 And the other one is that, if they didn't
13 have the neck manipulation, or if they didn't do golfing,
14 or whatever, the stroke would not have happened, if they
15 jaywalked, but didn't get hit by the car.
16 Q You're aware that in the months of July and
17 August the rate of drowning of children increases
18 exponentially, are you not?
19 A I would assume so.
20 Q And are you also aware that during the months of
21 July and August the number of children eating ice cream
22 cones before they go swimming rises exponentially?
23 A I assume so. I don't know.
24 Q So using your theory, then, are you telling me

1 that if a child eats an ice cream cone and goes swimming
2 and drowns, that the ice cream cone caused the drowning?
3 MR. MALCYNSKY: Objection.
4 A No. The water caused the drowning.
5 MR. MALCYNSKY: No foundation for that.
6 Q Now in your materials, you referred to Hall.
7 A To what? Sorry?
8 Q Hall, a report by Hall. Are you familiar with
9 that?
10 A What paragraph is that?
11 Q Let me direct you to it. Page 24 of mine.
12 A Paragraph 24?
13 Q I've numbered my pages, so it's a little bit
14 different than yours. Why don't I call your attention to
15 number 30?
16 A Paragraph 30?
17 Q Paragraph number 30 in your material.
18 A Yes.
19 Q You're referring to the innate intelligence of
20 the spinal cord.
21 A Yes.
22 Q Is this a criticism that you're making of the
23 chiropractic profession?
24 A Yes.

1 Q In terms of their terminology that they utilize?
2 A Yes.
3 Q And why is that?
4 A Because the words "innate intelligence" is
5 commonly listed in chiropractors as believing that the
6 specific highest neck area -- this goes back to the 1930s
7 to the hole-in-one theory, that, by manipulating the
8 highest neck, you can cure or treat just about everything.
9 Q All right, so, let me take you to your highest
10 neck theory, and then I'll take you back to Ms. Hall.
11 MR. PATTIS: I object to the form. I don't
12 think he has a highest neck theory.
13 Q Throughout all of your materials, you've talked
14 about highest neck manipulation, and do you know whether
15 this is a term of art in chiropractic medicine?
16 A It's not commonly used. They usually refer to
17 the occipital upper cervical subluxation complex, which is
18 in my documents and in this particular textbook by Kirk
19 Ericson.
20 Q The textbook that you're relying on is by Kirk
21 Ericson?
22 A Yeah. It's in 15, and it describes over 200
23 conditions that can be treated by highest or upper
24 cervical subluxation complex. It's available at the

1 Bridgeport Book Store.
2 Q Now when you're talking about highest neck
3 manipulation, what are you talking about? What area of
4 the cervical spine are you referring to, Dr. Katz?
5 A From the base of the skull until the bottom of
6 the axis.
7 Q And you're talking about what type of
8 manipulation or adjustment in the area?
9 A There could be all types. I think that we're
10 particularly concerned about extension rotation.
11 Q So you're saying that there's an actual rotation
12 of the cervical spine in a high neck manipulation?
13 A There could or could not be.
14 Q And where would that actually occur?
15 A Well if you look at many of the what's called
16 the high velocity, low aptitude thrust.
17 Q Are you talking about the HIL?
18 A HLVA, yes.
19 Q What about a NUCCA?
20 A Well NUCCA is an organization, National Upper
21 Chiropractic Cervical Association, who believes only in
22 treating or manipulating the highest neck. They have no
23 interest in any other part of the body.
24 Q And are you familiar with the term

1 Oblack(phonetic).

2 A Pardon?

3 Q Are you familiar with the term Oblack?

4 A Oblack, no.

5 Q Or the cale(phonetic) maneuver?

6 A No.

7 Q All right and these are maneuvers that you would

8 associate with a high neck manipulation or not?

9 A I don't know what they are.

10 Q Can you describe for me how a high neck

11 manipulation is performed, then?

12 A Well, usually, the patient is on their back,

13 from what I've seen. I have textbooks. I have in my

14 paper a picture of a high neck manipulation being done,

15 actually on a baby, which is document -- let me see if I

16 can find it.

17 It's a document on a baby, newborn baby or

18 young baby, and, basically, the chiropractors use various

19 techniques, but they take the head, sometimes the chin,

20 place it in either flexion or extension, try to feel what

21 can be released, and then can or cannot do a high

22 velocity, low amplitude type of neck manipulation.

23 Q And what area of the cervical spine are you

24 referring to when this rotation is done?

1 A The area that concerns me and concerns all the
2 scientists is from the top, from the skull, the
3 apliaxis(phonetic) junction and the aplistans(phonetic)
4 junction, because that's where the vertebral artery is in
5 the back, and a cervical artery in the front, which I
6 mentioned, was those 28 percent of all cases were not part
7 of Cassidy statistics.
8 Q I'm not concerned about that. I'm concerned
9 about anatomically where you're performing the highest
10 neck manipulation that you refer to throughout your
11 materials and seems to be what you're most disturbed
12 about.
13 A Yeah. Document eight shows it being done on the
14 baby.
15 Q Where are we? Document eight?
16 A Yes, document eight.
17 Q Have you actually seen one of these performed,
18 or are you just working from something in a textbook?
19 A I haven't seen any performed on a baby. I've
20 had some chiropractors show me how it would be performed
21 without actually doing it.
22 Q You've never seen a highest neck manipulation
23 performed?
24 A I've seen many on television, videos, You Tube.

1 It's filled with examples, hundreds of times.
2 MR. PATTIS: I move that Attorney Leonhardt
3 Moore submit herself to a high neck manipulation.
4 MS. MOORE LEONHARDT: I might need to by
5 the time the day is done. I've turned my neck so many
6 times, counsel.
7 MR. PATTIS: I'd make that motion. I'd ask
8 for a ruling. (Laughter)
9 CHAIRMAN SCOTT: We're going a little off
10 field on this.
11 Q If you have a problem with cervical
12 manipulation, just what is the problem, Dr. Katz, because
13 I'm having trouble understanding it?
14 A The problem is that the Chiefs of Pediatrics of
15 Canada said that it should not be done on infants and
16 children, that it's useless and --
17 Q Well I'm talking about the mechanics of the
18 procedure, not what the Chiefs of Pediatrics in Canada
19 might believe, or not believe, or what their opinion is.
20 I'd like to know what you have --
21 MR. PATTIS: Objection. Objection. The
22 witness was not permitted to answer the question. He was
23 asked what his problem was, and he was answering it, and
24 he talked about the opinion of others.

1 A I have a problem, that 64 neurologists all
2 across Canada issued a public warning from what they've
3 seen on a firsthand basis in their office, that it's
4 dangerous, which was very clear, in return for which they
5 were threatened with a lawsuit by the President of the
6 Canadian Chiropractic Association.
7 MS. MOORE LEONHARDT: I move to strike your
8 answer as non-responsive.
9 Q I'm asking you what is the problem that you have
10 with the mechanics of the cervical manipulation that
11 causes you to come all the way from Canada to be here?
12 What is it about the manipulation? Explain to me the
13 mechanics of it that you feel is the problem.
14 A Extension rotation manipulation, in particular.
15 Q The rotation, in particular? That's what the
16 problem is?
17 MR. PATTIS: Objection, mischaracterizing.
18 He just said extension rotation manipulation. If the
19 witness would be permitted to answer?
20 MS. MOORE LEONHARDT: I'm trying to
21 understand.
22 A I think rotation adds to the risk, but I think
23 that extension and sudden thrusting is -- the end result,
24 I don't know exactly what they're doing. We have

1 speculation. I mean I do know, to a large extent, because
2 I see it, but the end result is a stroke, or death, or
3 Brown-Sequard Syndrome, dural tears. There's a whole
4 bunch of things.
5 Q Dr. Katz, you don't have any scientific data
6 with you today that proves that any neck manipulation
7 that's been performed by a chiropractor has caused a
8 stroke, do you?
9 A Absolutely do. There's 171 studies in there.
10 Q These are all case review studies, are they not,
11 that you're referring to? They're case reviews?
12 A There's legal reviews.
13 Q They are case reviews. Let's talk about the
14 case reviews, Dr. Katz.
15 MR. PATTIS: Objection, argumentative.
16 MS. MOORE LEONHARDT: He's under Cross.
17 MR. SHAPIRO: I would overrule the
18 objection.
19 MR. PATTIS: -- of a chiropractor. It's
20 still argumentative.
21 Q Tell me about the case reviews. What valid
22 scientific data do you have in those case reviews that
23 establishes a cause and effect relationship between a
24 manipulation of the cervical spine and a stroke?

1 A The time sequence.
2 Q The time sequence? So the temporal association?
3 A The immediate direct symptoms and time sequence.
4 Q So simply a temporal association, an association
5 in time, which Dr. Cassidy's study --
6 MR. PATTIS: Mischaracterizing it. You
7 talked about immediate symptoms, and she's now commenting
8 on the testimony of --
9 MR. SHAPIRO: Counsel, I would recommend
10 overruling your objection.
11 A The time sequence is an essential factor.
12 Q The time sequence alone is not proof, though, of
13 a cause and effect relationship, is it?
14 A I disagree, and so do the neurologists of
15 Canada, the pediatricians of Canada, and the scientific
16 literature.
17 Q Thank you. Now you would agree, though, that
18 the cervical manipulation done for head and neck pain is
19 all done within the usual range of motion, wouldn't you?
20 A No.
21 Q You are not trained as a chiropractor to perform
22 a neck manipulation, are you?
23 MR. PATTIS: Asked and answered.
24 Q What I'm asking you to focus on is the neck

1 manipulation that is done by chiropractors in accordance
2 with what they're trained to do.
3 A No.
4 Q You haven't received that training?
5 A No. You asked me -- you want to rephrase the
6 question again, the first question?
7 Q Okay. Would you agree that the cervical
8 manipulation that is performed on the neck to relieve head
9 or neck pain is all performed within in the usual range of
10 motion?
11 A No.
12 Q And what's the basis for that?
13 A The basis of that are the cases that I've
14 reviewed, the histories of patients, as to how the neck
15 manipulation was done, and that's it.
16 Q So how the neck manipulation was done is really
17 anecdotal information that you've received either from the
18 case reviews, correct?
19 A Yes.
20 Q Or its anecdotal information that you received
21 from persons who have received stroke, who have
22 experienced a stroke and believe that there's an
23 association with a visit to a chiropractor?
24 A It's not anecdotal.

1 Q Thank you.
2 A It's not anecdotal.
3 Q Now turning to your submission, would you please
4 take a look at document number 30?
5 A Yes.
6 Q Can you identify that document for me, Dr. Katz?
7 A Yes. A group of us wrote it together,
8 contributed to it.
9 Q All right, so, at the top of the page, I'm a
10 little confused, and that's why I've asked you to take a
11 look at this. At the top of the page, it states, there's
12 a question asked, "Would you know if you had a stroke due
13 to a chiropractic highest neck manipulation? Can you put
14 two and two together?"
15 A Yes.
16 Q And then, immediately under that, there's a
17 reference, "The Wellness Letter. The University of
18 California, February 2004," and then, in quotes and
19 underlined, "Don't agree to neck manipulation." Where did
20 that come from?
21 A That came from somebody in California, and I've
22 never verified it, but -- well I shouldn't say never
23 verified it. I did say where is it from, and they sent me
24 a reference for it.

1 Q All right. You haven't looked at The Wellness
2 Letter to verify whether the statement is accurate or not?
3 A I believe I did, but I don't have it in front of
4 me.
5 Q You're not sure.
6 A I don't think I would write it if I didn't
7 verify it.
8 Q The remainder of this document is not what's
9 contained in The Wellness Letter that contains that quote,
10 is it?
11 A No.
12 Q So we've got a document that begins on page 30
13 and runs onto a second page, at the top of which seems to
14 be an identity of The Wellness Letter, and, quite frankly,
15 I was confused, because I thought this document was The
16 Wellness Letter.
17 MR. PATTIS: Objection. We'll stipulate
18 that Ms. Moore Leonhardt is frequently confused, but
19 that's argumentative, and the document speaks for itself.
20 I'd ask for relevance.
21 Q Dr. Katz, are you telling me that this document
22 --
23 MR. PATTIS: I'd ask for a ruling on
24 relevance grounds.

1 MR. SHAPIRO: She's asking another
2 question, and I don't think he answered that question.
3 MS. MOORE LEONHARDT: Right.
4 Q Would you answer the question, please?
5 MR. PATTIS: I do object on relevance
6 grounds.
7 MR. SHAPIRO: Okay. Hold on. Hold on, Dr.
8 Katz. Attorney Moore Leonhardt, can you repeat the
9 question?
10 MS. MOORE LEONHARDT: Yes.
11 Q The question is is the document that's reflected
12 on page 30 and onto the next page, which at the top of the
13 page is identified as The Wellness Letter, actually The
14 Wellness Letter?
15 A No.
16 Q All right, so, in actuality, the only thing from
17 The Wellness Letter you think is a quote, and the
18 remainder of the document is something that you created,
19 along with some other people you work with?
20 A That is right.
21 Q Would you agree or disagree with me, that stroke
22 symptoms could occur while driving a car as a result of a
23 -- excuse me. Let me just withdraw that. On the
24 following documents that you have listed here, on this

1 page 30 and onto the next one, I believe you refer to a
2 section on the second page of examples of how strokes can
3 result from a chiropractic highest neck manipulation. Do
4 you see that?
5 A Yes.
6 Q And one of the examples that you give is a
7 chiropractic highest neck manipulation could occur while
8 driving your car, is that correct?
9 A No, it's not correct. What is happening is the
10 person has double vision. This is referred to in the
11 Donsis Study, which is part of my -- in my pre-filed
12 testimony, finding that people have a neck manipulation
13 without an actual dissection, they have microscopic
14 thrombi, which form on the inner of the vertebral artery,
15 it goes through the occipital lobe, and it causes a field
16 loss, which can develop over two, three weeks, and they
17 don't realize that it was micro emboli thrombi from the
18 neck manipulation that caused it, and that's in the Donsis
19 Study.
20 Q That's in the Donsis Study?
21 A Which is referenced in my among the 170 studies,
22 yes.
23 Q And is that a peer reviewed study?
24 A I can't answer that question.

1 Q Was it a case review?
2 A It was a report by an ophthalmologist, that he
3 was seeing people who had a neck manipulation, developed
4 visual field loss, had micro emboli in their occipital
5 lobes, and he wanted to make people aware that the two
6 were related.
7 Q So it was a case report and not a study of
8 anywhere near the breath of the study of Dr. Cassidy, yes
9 or no?
10 MR. PATTIS: Argumentative.
11 A I don't compare the two.
12 MR. PATTIS: Objection, argumentative. Dr.
13 Cassidy's may have been --
14 Q You don't compare the two. Thank you.
15 MR. PATTIS: -- but it might have been an
16 inch deep.
17 MS. MOORE LEONHARDT: He's answered the
18 question.
19 Q Now isn't it true that that very experience
20 could happen while I'm driving my car and I turn my neck
21 to take a left-hand turn and view whether or not there's a
22 car coming?
23 A It could, yes, but your micro emboli wouldn't
24 date back two weeks.

1 Q And if a neck manipulation was performed by an
2 orthopedic doctor, as opposed to a chiropractic doctor,
3 the same event in your view could occur, is that correct?
4 A Yes.
5 Q And the same thing could happen if a physical
6 therapist performed a neck manipulation and the person
7 experienced the same outcome?
8 A Yes.
9 Q In addition, that outcome could happen just
10 spontaneously, without any type of force or manipulation
11 being applied to the person's neck, wouldn't you agree?
12 A That's a subject of debate. The CMAJ article
13 said that we doubt that spontaneous dissections occur,
14 that retrospective analysis are not reliable, and their
15 study was a prospective analysis, and, on a prospective
16 basis, they said that they didn't believe it occurred.
17 The final statistic that they gave, which
18 is in the testimony, is that perhaps 15 percent we don't
19 know the cause. And they cause they speculated were
20 people who had Eller Donna Syndrome(phonetic) Down's
21 syndrome, people who have hyper (indiscernible) syndromes.
22 Q Your monograph is likened to what they use in
23 the pharmaceutical industry, correct?
24 A Yes.

1 Q And you're aware that the FDA standard, where
2 they determine that there's no need to make a warning
3 about a risk, is one in one million, are you not?
4 A No, I'm not aware.
5 Q But you've designed these monographs for the
6 purpose of promoting warnings being given to patients
7 about particular risks that you feel are important to be
8 made?
9 A I think the essential part of the monograph is
10 the things that are not indicated as being good for --
11 should not be done for. That's 90 percent of what it's
12 about.
13 Q But when you did all this research to come
14 before the Board here, you didn't look into what the FDA
15 uses, in terms of a standard for determining whether or
16 not a risk is at a magnitude or quantitatively at a level
17 where it requires a warning to be issued?
18 A I'm not aware there is such a standard.
19 Q All right. You're here today and have told this
20 Board that you're advocating for Doctors of Chiropractic
21 to be bound by the same standards with regard to informed
22 consent as applied to physicians, surgeons and physical
23 therapists, correct?
24 A Yes.

1 Q And what are you aware of with regard to the
2 informed consent law as it applies to physicians in
3 Connecticut?
4 A I would imagine it's the same as for physicians
5 everywhere.
6 Q You haven't looked into it?
7 A No.
8 Q Have you looked into the informed consent law as
9 it applies to physical therapists in Connecticut?
10 A No.
11 Q Have you familiarized yourself with the informed
12 consent law that the chiropractors in Connecticut are
13 bound to abide by?
14 A I've read the submissions.
15 Q Other than that, have you investigated or
16 researched what the law of informed consent is with regard
17 to Doctors of Chiropractic care?
18 A I followed-up on some of the research to look
19 for the references that were submitted by the
20 chiropractors.
21 Q And what is your understanding about what the
22 current state of the law of informed consent is with
23 regard to Doctors of Chiropractic care?
24 A The key thing that concerns me is there's no

1 specific obligated warning about stroke, and there's no
2 discharge summary to patients who might be having a
3 stroke.
4 Q But you've already testified that you believe
5 that chiropractors should be bound by the same informed
6 consent law that doctors, physicians that is, and physical
7 therapists are bound by, correct?
8 A I testified that the procedures for a monograph
9 that doctors are obliged to adhere to should be the same
10 for chiropractors.
11 Q These are Canadian procedures. Is that what
12 you're promoting here?
13 A No. The FDA sets the same procedures for
14 physicians in the United States.
15 Q These are monograph procedures related to
16 prescription drugs, correct?
17 A Not only prescription drugs, but equipment that
18 is used, all types of stuff. It's not just drugs.
19 Q Why would you apply that to chiropractors when
20 there are no such monographic requirements applied to
21 physicians or physical therapists in the State of
22 Connecticut at this time?
23 A For this type of procedure? I think there
24 should be for all. I think whether you're a doctor,

1 orthopedic surgeon, physical therapist, or chiropractor,
2 you should adhere to the same standards.
3 Q But they don't exist. The specific requirement
4 that you're seeking to have this Board embrace and adopt
5 and put into play with regard to the chiropractic
6 profession does not exist with regard to these other
7 professionals. Are you aware of that?
8 A Are you talking about neck manipulation, in
9 particular?
10 Q I'm talking about all professions in Connecticut
11 who perform neck manipulations, yes.
12 A If they don't exist, I think they should exist.
13 Q Are you telling me you're not aware of whether
14 they exist or not, Dr. Katz?
15 A I'm not aware if they exist or not.
16 Q So you really can't say that what you're trying
17 to convince the Board to do is to establish a level
18 playing field here in Connecticut, is it?
19 A No, I can't and I have.
20 Q Would you please turn to page 12? Well it's my
21 -- let me see if I can find this. At the top of the
22 document is number 21.
23 A Paragraph 21?
24 Q Yes. So it begins at number 20.

1 A Twenty-one, yes.
2 Q Right. Where you're advocating for the
3 monograph and it goes over onto the next page.
4 A Yes.
5 Q And you refer to this level playing field notion
6 on this page, correct?
7 A Yes.
8 Q And along the way there, you say, and I quote,
9 "By doing so, chiropractic regulatory bodies will not
10 throw out the baby with the bathwater. They will throw
11 out the nuts among the berries."
12 A Yes.
13 Q Do you see that?
14 A I do.
15 Q What do you mean by that, Dr. Katz?
16 A I mean that there's a group of chiropractors,
17 who have theories, which, to doctors, sound and are
18 completely unscientific about the highest neck causing
19 autism, attention deficit disorder, a way to immunize
20 someone. A lot of that is outlined in this textbook.
21 Q So you think that there are some nuts and
22 berries among the chiropractic profession? Is that what
23 you think?
24 A I think there are some good chiropractors and

1 some bad chiropractors.
2 Q And the bad ones you refer to as nuts, is that
3 right?
4 A That's an expression, which is --
5 Q Well you've used it, haven't you?
6 A It's a common expression.
7 Q This isn't the only time you've used that
8 expression against this profession, have you?
9 A I'm saying it's a common expression used by many
10 people.
11 Q What is your opinion with regard to the use of
12 DPT vaccines and autism, Dr. Katz?
13 A My position is that there's no relationship
14 that's ever been shown.
15 Q So I take it, then, you don't warn your
16 representatives of the children that you care for that
17 there's a concern or an association, if you will, that's
18 been discussed in the greater community with DPT
19 vaccinations and autism?
20 A No. The prevailing opinion is that autism is
21 inherited on the number 12 chromosome, 50 percent sequence
22 in the same family. We often see it on MRI, and every one
23 of my patients who comes into my office gets a
24 description. Matter of fact, they do. Every one of my

1 patients gets a growth and development and an intellectual
2 development paper, which they have to check off at every
3 visit, and it mentions at a year specifically what the
4 best test for autism is to find at a year of age.
5 That test is to take a picture of the
6 birthday party of the one-year-old child. They don't look
7 at the candles. I actually do.
8 Q All right. Do you support the treatment of
9 autistic children by chiropractors, Dr. Katz?
10 A No.
11 Q Would you agree or disagree that researchers
12 claim that their study clearly demonstrated that
13 chiropractic adjustments are superior to any form of care
14 for infantile colic?
15 A No.
16 Q You disagree with that?
17 A Yeah. That was the study done by
18 Coolin(phonetic), I think, in Denmark.
19 Q And you disagree with their finding?
20 A I do.
21 Q And is there a reason why you disagree with
22 that?
23 A Well what they're saying is that if you, and
24 it's in this book, you can take the highest neck of a baby

1 with colic and you manipulate it, that eventually the
2 colic will go away.
3 Q Okay. Are you referring to the October 1999
4 study, "The Short-Term Effect of Spinal Manipulation in
5 the Treatment of Infantile Colic."
6 A Yeah.
7 Q And you've reviewed that study?
8 A I have.
9 Q All right, now --
10 A Not only myself, but a number of people at the
11 Children's Hospital reviewed it.
12 Q That was a randomized controlled clinical trial
13 with a blinded observer, was it not?
14 A It doesn't matter what it was. The end result
15 doesn't make anatomical sense.
16 Q You don't consider that to be valid scientific
17 data that was generated by that study?
18 A No.
19 Q Okay.
20 A Because you take a condition and treating it
21 until it goes away, but are you treating it?
22 Q So you believe that just by case studies alone a
23 quantum of risk can be assessed, even if there's no
24 control group, so I understand your testimony?

1 MR. PATTIS: Asked and answered.
2 Objection. We've been over this.
3 MR. SHAPIRO: I would recommend sustaining
4 the objection.
5 Q Dr. Katz, would a case report by a chiropractor
6 describing successful treatment of Multiple Sclerosis
7 establish that the treatment caused that benefit?
8 A No.
9 Q Would a case report by a chiropractor describing
10 successful treatment of colic establish that the treatment
11 caused that benefit?
12 A No.
13 Q Would a case report by a chiropractor describing
14 successful treatment of otitis media establish that the
15 treatment caused that benefit?
16 A A poor case report, which are the three referred
17 to, no.
18 Q Would a case report by a chiropractor describing
19 successful treatment of difficulties with breast feeding
20 establish that the treatment caused the benefit?
21 A That would be a poor case report, no.
22 Q So, then, are you saying that a case report is
23 not capable of establishing a cause and effect
24 relationship?

1 A No, I'm not saying that.
2 Q Then how does a case report, such as those in
3 your pre-submitted testimony, about cervical manipulation
4 and stroke establish cause and effect? I don't get it,
5 Dr. Katz. And maybe I'm just ignorant, because I'm not a
6 medical professional, but if you could please explain to
7 me how that establishes a cause and effect relationship,
8 so that I can finish my Cross-Examination of you. I'd
9 appreciate it.
10 A The study by Saeed, "Vertebral Artery
11 Dissection, Warning Signs and Clinical Features,"
12 describes patients who were normal, who had certain
13 warning signs of potentially stroke, none of which were
14 coded by David Cassidy, they had the neck manipulation,
15 they developed immediate symptoms.
16 The symptoms developed in the brain stem or
17 the occipital lobe, directly related to where the neck
18 manipulation was done. They were admitted to hospital.
19 They had neuroradiology studies done, and the dating of
20 the thrombo emboli, which can now be done with factor
21 eight clotting factors, dated the event to the time, plus
22 the Holderman Study on 64 legal cases said that the time
23 was within 30 minutes, so is it a case report if I get hit
24 by a car? It's a case report, but I got hit by the car.

1 Q You're telling me that case reports don't
2 establish benefits, but they can be used to establish
3 cause and effect, then?
4 A No. They can be used --
5 Q Aren't you trying to have it both ways, Dr.
6 Katz?
7 MR. SHAPIRO: Counsel, you have to let him
8 finish his answer.
9 A They can be used for both, of course.
10 Q All right, now, on the page in your document,
11 the first number on the top of it is 189, and you do refer
12 to the Holderman and Cary(phonetic).
13 A Yes.
14 Q And I believe that's an article about litigation
15 and lawsuits and trying to establish a cause and effect.
16 Just because there was a lawsuit and a payment, therefore,
17 the chiropractor, who paid the settlement amount, caused
18 the stroke, just because money was exchanged. Do you
19 recall that journal article?
20 A Yes.
21 Q And you believe that that is scientific data
22 that supports your position here today?
23 A Yes, I --
24 Q It calls for a yes or no answer.

1 A Can you ask me the question again?
2 Q Your answer was yes?
3 A No, I'd like you to ask me the question again.
4 Q All right. I'm going to move on. You have
5 referred to a study by Vickers and Zoleman(phonetic) 1999.
6 A What paragraph is that?
7 Q This is in the --
8 A Oh, yeah, I see it, 191. Yup.
9 Q That was a case study, was it not?
10 A It was a report, asking chiropractors and asking
11 physical therapists how many cases have you seen.
12 Q But it was not a study with a randomized trial
13 or any control group, correct?
14 A As far as I know, no.
15 Q All right. What about Dunn? You've referred to
16 a reference to Dunn.
17 A Yes.
18 Q Was that a case study, as well, case report?
19 A It sort of said, well, how many strokes have you
20 seen, so they never looked at individual cases. They
21 said, you know, we think we've done 20 million
22 manipulations. How many have you seen, asking the
23 chiropractors, themselves.
24 Q This is all anecdotal case reports?

1 A Yes.
2 Q And you also had Kruger and Okasaki(phonetic)
3 1980.
4 A Yes.
5 Q Same thing? Case report?
6 A Well what they suggested is it's seriously
7 underestimated, because most adverse events are not
8 reported in the public domain.
9 Q Was that a case report from a physiotherapist?
10 A The Dunn I believe was, yes.
11 Q Yeah. In fact, all of these that I'm reciting
12 are from physiotherapists, are they not?
13 A The chiropractors reported one in five million.
14 The physical therapist reported one in --
15 Q No, I'm referring to this paragraph in 191.
16 Paragraph 191, "In contrast, report from the physiotherapy
17 profession." So is that just the Vickers and Zoleman
18 report that you're referring to, the physiotherapy?
19 A I referred to two reports there.
20 Q All right. Vickers and Zoleman and the other
21 one was Dunn?
22 A Yes.
23 Q Correct. And then the next grouping, Kruger and
24 Okasaki, Robertson in 1981, Senel(phonetic) and Smith in

1 1993, were those physiotherapists, or were they
2 chiropractors? Do you know?
3 A Physical therapists.
4 Q They were physical therapists? I see. So
5 you're now comparing that, and, yet, you haven't created a
6 level playing field in Canada with the monographs for
7 chiropractors and physical therapists and physicians, have
8 you?
9 A The physical therapists have accepted the
10 procedure monograph under the orthopractic guidelines, so
11 they have set the standard for highest neck manipulation
12 safety using the procedure monograph.
13 Q And, so, in short, then --
14 A And they've joined publicly with their names on
15 a website.
16 Q It's your desire here to have this Board mandate
17 a monograph, or procedure, or protocol, if you will,
18 that's been designed by physical therapists in Canada and
19 apply it to chiropractors practicing in Connecticut in a
20 way that's never been done before, isn't that true?
21 A No. The procedure monograph has been endorsed
22 by a number of people, including a clinical neurologist at
23 Yale University.
24 Q And do you have that endorsement with you today?

1 A I don't.
2 MS. MOORE LEONHARDT: Thank you. Nothing
3 further.
4 MR. SHAPIRO: Attorney Malcynsky?
5 MR. MALCYNSKY: Thank you. Just a couple
6 questions, Dr. Katz.
7
8 CROSS-EXAMINATION
9 BY MR. MALCYNSKY:
10 Q Did you ever attempt to practice or be allowed
11 to practice chiropractic medicine?
12 A No.
13 Q When you were less than forthcoming about being
14 a physician when making inquiries with chiropractors, that
15 was in your attempt to gather information on chiropractic?
16 A Yes.
17 Q And you're here today not as a chiropractor,
18 correct?
19 A No.
20 Q Not as a research scientist?
21 A No.
22 Q You're here as someone who has extensive
23 knowledge and is passionate on the subject of informed
24 consent, correct?

1 A Evidential, yes, based on evidence, not just
2 passion.
3 Q And your intention is to provide the Board with
4 your opinion, as to whether requiring informed consent and
5 a discharge summary is good public policy, correct?
6 A Yes, especially since the risk I believe is
7 substantial.
8 Q And what is your opinion about that public
9 policy? Should this Board issue a Declaratory Ruling?
10 A I think they should.
11 MR. MALCYNSKY: No further questions.
12 MR. SHAPIRO: Attorney Pattis?
13 CROSS-EXAMINATION
14 BY MR. PATTIS:
15 Q Dr. Katz, you're trained as a medical doctor?
16 A Yes.
17 Q In Canada?
18 A Yes.
19 Q And can you describe for the Board the course of
20 a four-year medical education? In other words, what
21 courses you take.
22 A Well there is a prerequisite of an undergraduate
23 degree before, and, after that, there's four years at
24 McGill University, which I think is the third rated

1 medical school in North America.
2 You take courses in anatomy, physiology,
3 biochemistry, neurology, statistics, epidemiology, all the
4 pediatric specialties, general surgery, internal medicine.
5 Q And in the United States, many medical education
6 programs are organized around the concepts of the
7 structure and function of the human body. I don't know
8 whether that is the case in Canada. Is it?
9 A Yes. The standard was set in 1910 by the
10 Flexnor Act, that medical education involved three
11 requirements, one, that it be scientific, and it was an
12 American Act, by the way, two, that there be training in a
13 hospital, because a lot our training now is in a hospital,
14 and, three, that it be university-based, so the part I
15 left out is that a lot of our training is in the hospital.
16 Q But my question was more particular, and it went
17 to how the various components of the body relate one to
18 another to the general concept of health. Was part of
19 your medical education on a course-by-course basis devoted
20 to an understanding of the structure and function of the
21 various organs in the body and the various systems of
22 which a body is composed?
23 A The first fundamental course is in basic
24 anatomy, where we view cadaver dissections. After that,

1 there is a course in neuro anatomy, where the brain is
2 dissected out.
3 There's a course in micro anatomy, where
4 you look at slides of the various parts of the body, so
5 there's extensive anatomical study of where the ganglia
6 are, where the nerve roots are, what nerves exit where,
7 what the function of the brain is, which was developed
8 largely in Montreal at the Montreal Neurological Institute
9 by Wilder Penfield, who actually gave me a lecture.
10 Q With respect to the anatomy and the neurological
11 anatomy and the dissection of the brain, did you develop
12 an understanding and comprehension of the general
13 structure of the vertebral artery?
14 A Yes.
15 Q And where is that located? I'd ask to go down
16 myself and do it, but my hair has been objected to before.
17 Can you point to it on your own head?
18 A Yes. Right back here.
19 Q Okay, now, is there anything that is
20 particularly vulnerable or susceptible about the location
21 of the vertebral artery in the normal human body?
22 A Yes. The vertebral artery supplies the brain
23 stem.
24 Q What is the brain stem?

1 A The brain stem is --
2 Q Don't point to anything. Just tell us. We want
3 to get out of here today.
4 A It's in my submission.
5 Q Yeah.
6 A It's the part just where the spinal cord ends.
7 (Off the record)
8 Q Doctor, let's do this orally and not rely on
9 paper. It will go more quickly.
10 A Sure.
11 Q What makes that particular location, or what
12 makes that arterial configuration vulnerable or
13 susceptible to injury in your opinion?
14 A Because the vertebral artery is so important, we
15 have encased it completely in a series of rings going up
16 the neck.
17 Q Well we haven't done that. That's just the way
18 we come from our maker or evolved, as the case may be?
19 A That's right.
20 Q Okay.
21 A That's right, but at the end of the road, in
22 order to adjust for the increased flexibility of the
23 cervical atlas joint, the artery has to make a sharp
24 right-hand turn. It has to flare out, and then it has to

1 flare in.
2 Q Okay, now, the cervical -- you say cervical. I
3 guess we're adopting the Canadian pronunciation here.
4 Where is the cervical axial joint?
5 A That is the joint where the cervical artery goes
6 through the first cervical vertebrae, called the atlas.
7 Q And that would be the C-1?
8 A Yeah.
9 Q Is that the area that you refer to as the area
10 affected by highest neck manipulation?
11 A C-1 and C-2 and, of course, the carotid arteries
12 in the front, which account for 28 percent and were not
13 included in the statistics.
14 Q When did you attend medical school?
15 A 1965 until 1969.
16 Q At any point in your medical education, were you
17 taught that, as a result of manipulation of the upper
18 neck, based on the medical science that you were exposed
19 to, that bedwetting, for example, could be successfully
20 treated with a high neck manipulation?
21 A No.
22 Q Any otitis media?
23 A No.
24 Q Colic?

1 A No.

2 Q And, by the way, is colic a recognized medical

3 diagnosis, or is that a colloquial expression?

4 A There's a lot of opinion changing on colic, so

5 we're not referring to colic that much anymore. It's more

6 of a reflux problem, and it's more of a rectal anal

7 problem, so term "colic" is fading out.

8 Q I don't want to get Freudian about this, but are

9 you saying that there's rectal anal sort of implications

10 for a high neck manipulation?

11 A No.

12 Q Okay, let's just move on, then. This makes me

13 uncomfortable. It's been a long day. Now with respect to

14 -- you've used an expression a couple of times, called a

15 high velocity, low amplitude manipulation, correct?

16 A Yes.

17 Q What do you mean by that? That is composed of

18 two variables, velocity and amplitude, correct?

19 A Yes.

20 Q Can you explain to the Board and the lay

21 persons, in particular, what amplitude means?

22 A Sure. You take the head or neck and you move it

23 rapidly, and then the amplitude refers to the fact that

24 you stop quickly.

1 Q And when you stop, are you stopping within the
2 normal range of motion or outside the normal range of
3 motion?
4 A The chiropractors speak of beyond the normal
5 anatomical range, or normal physiological range of motion,
6 but I'm not sure what they mean by that.
7 Q Do you take that to mean that, otherwise, we can
8 just do it ourselves?
9 A No. Theoretically, it's done beyond the normal
10 range, and, often, you'll hear a crack --
11 Q Now with respect --
12 A -- sound. Not often, but sometimes.
13 Q Is it your opinion that manipulation of the
14 upper spine in that area carries with it the risk of
15 vertebral artery dissection?
16 A Yes.
17 Q What is a liminal, L-I-M-I-N-A-L, tear?
18 A You're talking about an intimal tear.
19 Q Okay.
20 A The vertebral artery has three layers. It has
21 an endothelial layer, which is the lining. It has a
22 muscular layer, which is supplied by nerves, so any silent
23 dissection in the muscular layer will not be silent. It
24 will be extremely painful, which is what the stroke

1 consortium reported.
2 And then it has an adventitial connective
3 outer layer, and, in Laurie Jean Mathiason's case, the
4 dissection went right through to the outer layer. So a
5 dissection means that the layers are separating. It
6 doesn't mean that there's a little flap. It means that
7 the endothelium is actually separating.
8 We were trying to find out why do we see a
9 predominance of women, because our statistics are that
10 there's a predominance of women, and all three inquests in
11 Canada have, in fact, been in women.
12 Reviewing this with neuroradiologists,
13 which I've done, and I asked them to look for interval
14 flaps, if you see interval flaps on x-rays, and the
15 universal answer is I've never seen one, but what they do
16 see sometimes are that the artery of the women in the left
17 vertebral artery is a little taut, and that our theory is
18 that if you extend the neck enough, you will, in certain
19 women who are susceptible, because the artery is taut, you
20 can cause a dissection.
21 That being said, as was shown with Laurie
22 Jean Mathiason, had she not had the neck manipulation, had
23 she not got hit by a car when she jaywalked, she would be
24 living until a grandmother, so a whole Cassidy Study, and

1 I have a lot more on the codes he used and so on and what
2 he left out on that first day, the whole idea, that a
3 statistical study will change the anatomy of the vertebral
4 artery, I think is an anatomical impossibility.
5 Q You're getting ahead of me.
6 A Sorry.
7 Q And I'd like you to think of a strand of pearls,
8 if you will.
9 A Okay.
10 Q We can go through the whole strand, but it's got
11 to be one at a time, okay?
12 A Sure.
13 Q And when I say "pop," that means I've heard
14 enough, as to a particular pearl, and we'll move onto the
15 next one, fair enough?
16 A Okay.
17 Q Now why do you believe -- withdrawn. Do you
18 believe that there is such a thing as a spontaneous
19 vertebral artery dissection?
20 A I would look at the literature for that, and I
21 would look to the publication of the Canadian Medical
22 Association Journal, which was a prospective study. It
23 was a beautiful prospective study. It was a case report.
24 It was a prospective case report, so, in effect, it was a

1 best experimental model.
2 And they said, and I quote, "We doubt that
3 spontaneous manipulation strokes occur," and all of the
4 ones that claim that have occurred, Shevinek and others,
5 are based on retrospective analysis, which are not --
6 you're trying to ask the people do you remember what you
7 did?
8 Q Now do you draw a distinction between something
9 that we claim to be spontaneous and something for which we
10 do not know the cause? In other words, do you view that
11 those terms as used synonymously by some investigators?
12 A Could you ask me that again?
13 Q Do you view the terms "spontaneous," insofar as
14 a vertebral artery dissection is concerned, and "not
15 knowing the cause," as used synonymously by some
16 investigators?
17 A No, because spontaneous dissections, we believe
18 that they do occur, tend to occur where arteries combine
19 together, which are in the lower neck, as they do in berry
20 aneurysms, which is inside the brain, which Lauretti
21 referred to, so I don't know if he ever heard of a
22 dissection, the berry aneurysm, that they're not the same,
23 which I think he implied they were.
24 Q Going too far a field. I'm going to --

1 A Sure. Okay, go ahead.
2 Q All right. With respect to vertebral artery
3 dissections, you answered questions from Ms. Moore
4 Leonhardt about things that could cause it, turning and
5 volleyball and whatnot.
6 A Yes.
7 Q Do you or do you not believe that a high
8 velocity, low amplitude rotation of the neck beyond its
9 normal rotation increases the risk of a vertebral artery
10 dissection?
11 A Yes, I do believe that.
12 Q And is that based on your understanding of the
13 structure and function of vertebral artery in the area of
14 the first and second --
15 A Yes. It's based on the basic anatomy. It's
16 based on the recommendations of physical therapists, who
17 abandoned that type of neck manipulation in Canada and
18 adopted the orthopractic guidelines.
19 Q Now you were asked questions about this notion
20 of vertebral subluxation. Were you taught vertebral
21 subluxation in medical school?
22 A The way chiropractors use the term, no.
23 Q Were you taught, in terms of any observation
24 that you've made of the structure and function of the

1 spine, or the nervous system, or the brain, have you ever
2 observed anything that led you to believe that these
3 portions of the human body had something known as a,
4 quote, "innate intelligence," end quote?
5 A The innate intelligence of the body is not
6 enclosed in a three-inch piece of meat, ligaments and
7 bones in the highest neck. It's enclosed within the
8 brain.
9 Q Okay and what is that? I don't know if I have
10 any. I mean, after several days of these hearings, I'm
11 becoming --
12 A The --
13 Q But what is the innate intelligence?
14 A Some chiropractors, especially the ICA and
15 others, list 33 beliefs about innate intelligence.
16 Q What are they? Give me three of them.
17 A That the intelligence of the body resides in the
18 highest neck area, which is discussed in this book.
19 Q I warned you about that. Stop looking at that.
20 Just talk to us.
21 A Sure. In highest neck area, that by rotating,
22 or doing a manipulation, you can remove a subluxation, and
23 you could release the energy, so this will flow down the
24 spinal cord and treat colic, bedwetting, or flow up and

1 treat autism, attention deficit disorder.
2 Q And you were asked a series of questions about
3 various studies about whether you knew, for example,
4 whether chiropractic care showed efficacy to the treatment
5 of colic.
6 A Yes.
7 Q You disagree with any such studies?
8 A I disagree with that study.
9 Q And the reason for that is what, sir?
10 A The study makes no anatomical sense, whatsoever,
11 and the study went on until the colic went away, so, if
12 you do that, you can treat bedwetting. If you treat
13 bedwetting by neck manipulation, you'll cure everybody if
14 you wait long enough, and if it takes long, it's tough
15 case.
16 Q Now is it your testimony, sir -- does the fact
17 that you cannot correlate these so-called findings with
18 any understanding of the structure and function of the
19 human central nervous system inform your opinion that the
20 studies lack validity?
21 A That's right. For example, in bedwetting,
22 you're talking about some sacral nerves, which obviously
23 can't be manipulated.
24 Q I'd like to ask you several questions about your

1 views on the Cassidy Study.
2 A Yes.
3 Q You were present when Dr. Cassidy testified
4 today?
5 A Yes, I was.
6 Q If I understand his study, it goes something
7 like this, that the triggering event, or the incident that
8 starts the inquiry, was hospitalization for a stroke.
9 A Yes.
10 Q And that by using a code that is unique to each
11 patient and retrieving data about where they sought care
12 from, investigators were able to say that certain
13 investigators -- withdrawn. That patients had gone some
14 to physicians and some to chiropractors, correct?
15 A Yes.
16 Q And, as a result of that series of events, that
17 is a stroke preceded by a visit to one office or another,
18 the Cassidy Study suggests that there's no discernible
19 difference in strokes, based on whether a person went to a
20 chiropractor or to a physician. Is that how you
21 understand the study?
22 A Yes, but they mixed up two different kinds of
23 strokes.
24 Q Among the reasons you disagree with the study is

1 that are there other reasons?

2 A Yes, because they didn't look at the types of

3 strokes that happened following the visit to the doctor's

4 office.

5 Q You mentioned at one point there are some 33 or

6 32 types of strokes. Did I hear that?

7 A Yeah, 22.

8 Q Now you're saying that, in the Cassidy Study,

9 there was no effort to discern or distinguish various

10 types of strokes. Why does that matter?

11 A Well it matters, because if you're hit by a car

12 and you have a stroke, the doctor in the emergency room is

13 going to write down the cause of the stroke. You got hit

14 by a car. Cassidy recognized this. He said in his paper

15 we can assume, or assuming non-differential

16 miscalculations, or this suggests, or our study had major

17 limitations, or the possibility of bias.

18 We were unable to compute bootstrap

19 confidence intervals in many cases. If you look through

20 all his tables, you'll see many asterisks all over the

21 place.

22 MS. MOORE LEONHARDT: I'd like to move to

23 strike. That's a misrepresentation of what Dr. Cassidy

24 testified to.

1 MR. PATTIS: He’s not referring to the
2 testimony.
3 THE WITNESS: I’m reading from his report,
4 and he said --
5 MS. MOORE LEONHARDT: I believe the witness
6 -- if you could direct me to the point in the report where
7 Dr. Cassidy is alleged to have said there were major
8 limitations in the study?
9 MR. SHAPIRO: Counsel, you can Redirect if
10 you need to Redirect or Recross.
11 Q Doctor, there’s no need to do that. There’s no
12 need to do that. I’d just ask you to complete your
13 answer.
14 A Pardon?
15 Q I’d ask you to complete your answer.
16 A Yeah. He says, for example, “Liu has shown that
17 ICD 9 hospital discharge codes for stroke have a poor
18 predictive value when compared to chart review.” So all
19 of those bootstraps, which couldn’t be done, the non-
20 differential misclassification refers to the variable of
21 do people have tension headaches have a stroke, have a
22 risk for a stroke about to happen compared to people who
23 don’t have tension headaches.
24 Q Now you’re familiar with the ICD 9 codes,

1 correct?

2 A Yes, I am.

3 Q Is there something that Dr. Cassidy and his team

4 could have done to better address this question about the

5 type of stroke, or is it a limitation in the ICD 9s that

6 the data simply comes in the form that it does?

7 A He could have not done a statistical review to

8 try to guess what was in the hospital record. He could

9 have said let me see the hospital records of people

10 admitted to hospital.

11 Q Well he raises the possibility or the prospect,

12 however, of doing so, violating the rights to privacy of

13 those people.

14 A The Canadian Stroke Consortium did exactly that.

15 They took the hospital records. They took the radiology

16 reports. They didn't rely on abstractors, which, in fact,

17 are three-year technical trained people, to try to get

18 abstracts out, and until doctors' handwriting can be read,

19 or, as my wife is trying to do, put everyone's medical

20 records on a computer, she works at the Jewish General

21 Hospital, abstractors -- I mean what Cassidy did was he

22 coded basically a radiological diagnosis.

23 Q Well he didn't code anything. He took data that

24 others had produced and that was abstracted, and my

1 question to you is a more focused one. Is there something
2 in the data?
3 I mean Dr. Cassidy testified, I thought
4 testified very well and compellingly, about this study and
5 its reliability insofar as broad classes of data is
6 concerned, and he suggested and he acknowledged that there
7 were limits on what could be known and what could be done.
8
9 What I'm asking you is, within those
10 limits, within the limits of what the data reflect, were
11 there additional steps that Dr. Cassidy and his team could
12 have taken to distinguish the strokes in a manner that
13 would have made the results more meaningful, insofar as a
14 study of causation is concerned?
15 A He would have had to know, as Liu suggested,
16 what the cause of the stroke was that left the doctor's
17 office, because the assumption is that everyone who went
18 to a doctor and had a stroke had a stroke because it
19 spontaneously dissected.
20 Q No, but what do you say to his point, that if
21 you aggregate the large numbers, patient X reports to the
22 hospital and you gather these people, 181, whatever the
23 number is, and then you look back to see where they've
24 gone, and you find that there's really no discernible

1 difference in who they visited, would you acknowledge or
2 would you not acknowledge that there's some force to the
3 argument that if they both have similar courses of
4 treatment, all other things being equal, you can't say
5 that one form of treatment rather than another causes
6 stroke? What's wrong with that argument?
7 A The cause of the stroke, because the people
8 coming from the chiropractor's office within that first
9 day, which was excluded, according to his own colleague,
10 he said, Cassidy said he was unaware of any other report
11 of what happened in the first day, and that's why he
12 excluded it.
13 Q You've said that a number of times, and I
14 thought I was listening, and I thought I Cross-Examined
15 Dr. Cassidy, and I'm looking at the charts in the report,
16 and they talk about zero to one, zero to three, zero to
17 seven, suggesting the first day was reported. What makes
18 you so confident that the first day was not?
19 A Because he started -- he didn't say -- he said
20 that if a person goes to a chiropractor and they're having
21 a stroke, we would assume they don't go to a chiropractor
22 to have a stroke. We would assume they go to the
23 hospital, but we don't know what happened.
24 Q I may just be tired, and I apologize to

1 everyone.
2 A That’s okay.
3 Q I don’t know if you have a copy of the Cassidy
4 Study in front of you.
5 A I do.
6 Q I would ask you to turn to Table Three.
7 A Yes.
8 Q I’ll wait for everybody.
9 MR. PATTIS: Are we ready, Mr. Shapiro?
10 A Yes.
11 MR. PATTIS: You’re not Mr. Shapiro. He’s
12 running the place.
13 THE WITNESS: My grandfather was a Shapiro.
14 CHAIRMAN SCOTT: We’re ready.
15 Q I’m looking at Table Three.
16 A Yes.
17 Q And I’m just a lawyer, but when it says any DC,
18 any Doctor of Chiropractic visit, zero to one day, that
19 suggests to me that that first day is captured, and I
20 don’t know how to read that any other way, and if there is
21 another way to read it, I wish you’d explain it to me.
22 A Sure. Not if they’ve had a stroke, because he
23 says that we left out -- because a person having a stroke
24 would go to a doctor, so none of those zero days include

1 people having a stroke.
2 Q But wasn't it established, and perhaps I didn't
3 understand him correctly, and I thought you agreed with me
4 moments ago, that the triggering event, the incident event
5 is the report of a stroke, which is typically done at an
6 inpatient facility, correct?
7 A Yes.
8 Q And then because each patient has a unique
9 identifying number, you're able to reconstruct where they
10 had gone previously, correct? Just yes or no.
11 A Yes, except for one limitation. Eighty percent
12 of emergency doctors are family doctors or family
13 physicians, about 80 percent.
14 Q Wait. I'm going to insist that you answer my
15 question.
16 A Okay, go ahead.
17 Q I look at the methods source population, and Dr.
18 Cassidy called me out on many occasions for not being
19 precise. I'll try to be precise here.
20 A Yes.
21 Q I thought that the source population combined
22 the discharge abstract data from the Canadian Institute
23 for Health Information, which captured hospitals, correct?
24 A Yes.

1 Q Would you agree with that?
2 A Yes, hospital discharge summary.
3 Q Okay, now, the OHIP, I forgot what it is, the
4 Ontario Health Insurance Plan, that covered ambulatory
5 care by providers in their office, whether chiropractors
6 or physicians, yes or no?
7 A Not completely. It could involve ambulatory
8 doctors -- can bill hospital procedures.
9 Q So is it your testimony, sir, that within the
10 OHIP category, there may be people who directly reported
11 to the hospital?
12 A Yes, and saw the family doctor in the hospital.
13 Q And is that one of the flaws you're referring to
14 in the Cassidy Study?
15 A Yes, because Cassidy did not use for the
16 ambulatory doctors the code of a patient being seen with a
17 stroke in the hospital, so he had, for that window of time
18 of the first day, no idea if the family doctor was seeing
19 the patient in the hospital or out of the hospital.
20 When I, as an ambulatory physician, bill in
21 the hospital, I --
22 MS. MOORE LEONHARDT: Objection. I believe
23 his answer was given.
24 Q Now were there other methodological concerns you

1 had with the Cassidy Study, sir?
2 A The whole notion, that people with muscular
3 rheumatism, and tension headaches, and strain, and I guess
4 we should include no pain, were signs of dissection about
5 to happen, are in direct conflict with, for example, the
6 Emery and Shuaib Study I referred to, which does mention
7 what are the reliable signs of a stroke about to happen,
8 so that whole supposition, that a person is about to have
9 a stroke if they have that, we'd have to have a
10 statistical study, showing that people with tension
11 headaches have more spontaneous dissections than people
12 with migraine headaches.
13 Also, if you're going to do that, your
14 codes are going to show what are the bigger and lesser
15 risks? In other words, the biggest risk is tension
16 headaches, the second risk is migraine headache, the third
17 risk is intervertebral disk, and that could have been
18 broken down, but it wasn't.
19 Q Do the ICD 9 codes --
20 A Those were the OHIP codes, so the first variable
21 was the OHIP codes and the claim, that these are reliable
22 indicators of a dissection about to happen. The second
23 set of codes were the discharge codes from the hospital,
24 of which vertebral artery dissection was left out, but,

1 also, when I code a hospital visit, doctors and
2 abstractors predominantly code a diagnosis, so I can code
3 locked-in syndrome.
4 Q What is locked-in syndrome?
5 A It's the condition where Linda Salisbury from
6 Connecticut, who died about two years ago after 14 years
7 lived after a neck manipulation, could not speak, walk, or
8 talk, and it's the same thing that Nette has, and it's
9 documented in my thing. When I code --
10 DR. POWERS: Doctor, I think the question
11 hasn't been answered. What is a locked-in syndrome? That
12 was the question, and you gave examples of people, but you
13 didn't describe what it is.
14 THE WITNESS: Yeah. Well I'm just saying
15 he didn't code for what doctors normally code for, which
16 is Horner's Syndrome, all the 22 conditions that are
17 complications of the neck manipulation. He didn't code
18 for those things. He didn't code for the diagnosis. He
19 coded for radiological diagnosis.
20 Q Are there other methodological issues that you
21 have with the Cassidy Study?
22 A Well I think that the way the Canadian Stroke
23 Consortium coded evidence of stroke was to code by
24 specific syndrome names, which doctors wrote on their

1 discharge summary, and they did not code by a radiological
2 diagnosis, which the abstractors are supposed to have
3 pulled out of these things.
4 You know, if people have a dissection about
5 to happen, why manipulate their neck if you don't have to,
6 if you don't have clear and precise evidence?
7 Let's say Cassidy suddenly discovered an
8 anatomical weakness in our arteries, apart from the main
9 one. The main one is the anatomy. The second one is an
10 unknown dissection. With an unknown dissection, we'll
11 live our lives until 90 years, unless we have the other
12 cause, so to create a second cause to forgive the first
13 cause, in other words, I caused this stroke, as he
14 testified, but I'm now forgiven, because I did a
15 statistical study, which forgave me, I mean --
16 Q All right. You've not ruled out, then, that
17 neck manipulation is a potential cause of some VBA
18 strokes, correct?
19 A And neither did Cassidy.
20 Q That's my point, that you agree with him on
21 that, correct?
22 A Yeah. He concluded --
23 Q And do you agree with him that there's no
24 acceptable screening procedure to identify patients with

1 neck pain at risk of VBA stroke?
2 A Well, no.
3 Q Yes or no.
4 A No.
5 Q Okay, now --
6 A The Emery Study does list some warning signs.
7 Q Do you agree -- are you aware of instances in
8 which clinical data supports the conclusion that patients
9 suffered from VBA strokes who did not initially present
10 with neck pain?
11 A Yes.
12 Q I want to just move on to a couple odds and ends
13 here. You mentioned in your testimony in response to
14 other counsel's questions, that you have in your
15 possession an affidavit that explains something, and I've
16 forgotten what. What does that affidavit explain?
17 A I've been painted out as someone who, you know,
18 was doing a whole bunch of things, or a few things. The
19 first painting was based on false and misleading letters
20 submitted to a Commission in New Zealand.
21 The second painting was based on items
22 stolen from my office, hired by the chiropractors.
23 Q How do you know that? I'm a criminal defense
24 lawyer. You accuse one of my clients of stealing

1 something, I want to see the fingerprints. How do you
2 know that, if an item was stolen, how do you know they
3 stole it?
4 A Because the person who did the stealing, which
5 is in my affidavit, named Pierre Masu and Marie
6 Clotrombla(phonetic), were hired and paid $60,000, I have
7 a copy of the contract, and that whole thing showed up at
8 the brown envelope in Toronto by the chiropractors, and
9 it's all in my affidavit, told me that they were at a
10 meeting, and this is hearsay, but that --
11 Q Well you're anticipating the objection, then,
12 sir. I see my adversary's finger ready to --
13 MS. MOORE LEONHARDT: I'd like to move to
14 strike this line of testimony, as it's far a field. The
15 witness is here. There's no reason for him to submit an
16 affidavit. He's testified about and made some accusations
17 --
18 MR. PATTIS: It's a speaking objection.
19 MS. MOORE LEONHARDT: -- and there's no
20 need to take this hearing off track.
21 A I believe that all of the characterizations of
22 me as someone who --
23 MS. MOORE LEONHARDT: -- to relevance.
24 DR. POWERS: Wait. Wait. Hang on a

1 minute. When we have an objection, you can't keep
2 talking, okay?
3 THE WITNESS: I'm sorry.
4 DR. POWERS: Thank you.
5 THE WITNESS: Okay.
6 MR. SHAPIRO: Attorney Pattis, can you move
7 on?
8 MR. PATTIS: Yes, I will.
9 MR. SHAPIRO: Thank you.
10 MR. PATTIS: May I have a moment, please?
11 MR. SHAPIRO: Yes.
12 Q Final area of questions. You were asked some
13 questions about the difference, and I don't know whether
14 you recognized one, between a temporal association and a
15 finding of causation.
16 A Um-hum.
17 Q What do you understand a temporal association to
18 mean?
19 A Temporal can mean something that happens over a
20 long-term or a short-term. The shorter the time between
21 the cause and the consequence improves the --
22 MS. MOORE LEONHARDT: Objection. Move to
23 strike. He's being non-responsive. He's already answered
24 the question.

1 MR. PATTIS: I don't think so. I thought
2 it was pretty illuminating, frankly.
3 MR. SHAPIRO: I recommend overruling the
4 objection. You can finish.
5 A If a person crosses the street and gets hit by a
6 car, there seems to be a cause and effect, because the
7 injuries were suffered, they were dead immediately after
8 being hit by the car.
9 Q But in that case you can observe with your own
10 eyes the car striking the person, correct?
11 A That's right.
12 Q You can't observe with your own eyes a stroke as
13 it's occurring in a chiropractor's office.
14 A Not in the office, but you can -- what we've
15 done is we developed very sophisticated methods of timing
16 these strokes. I'm actually writing a book for children,
17 called "The Clot Thickens," and it's all about how clots
18 form, and, basically --
19 Q You're not writing it for kids? You don't
20 expect them to read it.
21 A I'm writing it for kids 12 to 18 years of age.
22 Q You trying to scare them?
23 A A series of five books. Well I wrote one on
24 tetanus, and they're afraid to go outside now.

1 Q Good going.
2 A But at the Lana Dale Lewis inquest, which went
3 on for two years, by the way, and in the end was a five to
4 zero saying that neck manipulations caused it, we used
5 what are called factor eight dating, so when a person
6 comes into the hospital after having had a neck
7 manipulation, we can look at the clot.
8 For example, some clots separate out on
9 what's called a hematocrit effect, where, depending on
10 their age, they separate out, so we can look at the
11 hematocrit effect, we can use the size of the clot and a
12 retraction of the clot to date that clot.
13 For example, Lana Dale Lewis, she didn't
14 come to the hospital until five days later, and she didn't
15 die until 13 days later, but we were able, on autopsy, to
16 match the factor eight in her vertebral artery to the
17 factor eight in her brain to show that the one in the
18 brain was 13 days old compared to the one in the artery.
19 Q And that 13 days old, that related to what
20 particular event in her life?
21 A That's when she had the neck manipulation, so
22 it's not just a case study. It's a hematological study
23 evidence, it's a radiological study evidence, it's an
24 anatomical study evidence. It's a very close cause and

1 effect time relationship study for which there is no other
2 plausible explanation.
3 Q And in the Lana Dale Lewis study, by way of
4 recap, you were able, by using hematological data and
5 analysis, to determine the date at which a clot was
6 formed?
7 A That's right.
8 Q And to determine that, not withstanding the 13
9 day old character of the clot, she had been at a
10 chiropractor 13 days ago.
11 A That's right. And in another case, we were able
12 to use the hematocrit effect for subdural hematoma to date
13 it, as well.
14 Q Now with respect to your understanding of
15 statistics and the notion of causation, is it your
16 understanding, sir, that, as the understanding of
17 scientific phenomena grows, confidence in associations
18 sometimes rises to the level of an assertion of causation?
19 A Absolutely.
20 Q And with respect to the use of control groups, a
21 control group typically means holding all variables, but
22 the one you're interested in common, and then testing the
23 variable that you're unaware of?
24 A Every AIDS case --

1 Q Am I correct?
2 A Yeah, you're correct. Every AIDS case is a case
3 study.
4 Q Inducing strokes in people by some physical
5 means and watching them have an event, is there any pure
6 control group that can be used to determine this?
7 A I don't think you can do that. I don't think
8 you can ethically do that, and we ethically don't do many,
9 many things. We don't break children's legs to compare in
10 a control group how fast they heal compared to kids who
11 broke their own leg.
12 Q Final question, and I think this really is. As
13 a physician, is it your opinion that there is a
14 substantial risk of stroke arising from high neck
15 manipulation?
16 A Qualitatively, because these people have nothing
17 seriously wrong with them to begin with, yes.
18 Quantitatively, the interesting thing is that when you
19 look at Holderman, suddenly 64 new cases never reported in
20 the literature. When you look at clinical neurologists
21 all across Canada, saying they're seeing cases, there's
22 something going on.
23 When people can't put two and two together,
24 that they've had an occipital lobe visual field loss. We

1 just settled a case in Labrador, which is published in the
2 paper, where there was deafness associated with the
3 manipulation, so, yes, absolutely.
4 I don't think there's any need to have any
5 such cases, as the physical therapists have demonstrated,
6 and I would hope that the chiropractors would just
7 recognize -- we can't prevent car accidents, but we can
8 prevent unnecessary neck manipulations being done for
9 things other than specifically neck pain, the highest neck
10 area is proven to be of benefit.
11 MR. PATTIS: I want to honor my commitment
12 about no more questions. Thank you.
13 THE WITNESS: You're welcome.
14 MS. MOORE LEONHARDT: Just one follow-up.
15
16 RECROSS-EXAMINATION
17 BY MS. MOORE LEONHARDT:
18 Q In the substantial risk that you speak of,
19 that's because of your concern that there's a rotation
20 being done with a degree of force in the high neck area,
21 correct?
22 A It increases the risk.
23 MS. MOORE LEONHARDT: Thank you.
24 MR. SHAPIRO: Any questions from the Board?

1 DR. POWERS: I do.
2 EXAMINATION BY DR. POWERS:
3 Q I just have a couple of quick questions here, as
4 long as you promise not to talk about cars crossing
5 streets, and I won't bring up fire trucks, which, if you
6 weren't here for day one and two, then you don't get to
7 know that one.
8 A Or ambulances.
9 Q There's one point that you discussed that I'm
10 having a little trouble reconciling, and that, boy, we're
11 back to the Cassidy Study, but I have to do it. You said
12 that they left out the first day, which I sat here during
13 Dr. Cassidy's testimony, and that's not what I heard that
14 he left out.
15 What I understand was what they left out
16 was if someone had a previous stroke. The Table Three
17 that we've referred to, zero to one day, that Attorney
18 Pattis referred you to clearly shows that zero days,
19 meaning the day they see the chiropractor up to 24 hours
20 later. Can you show me in the study where it says he did
21 not include those people? I mean I guess we could always
22 recall Dr. Cassidy.
23 A Yes. He said, in this paper, that people who
24 were --

1 Q Please refer to a page.
2 A Yeah.
3 Q Paragraph.
4 A Sure. He said that we assumed the --
5 Q The page number, please?
6 A I'm trying to find it. I'm trying to find it.
7 Q Okay.
8 A Maybe you could find it, too, where he says it's
9 unlikely to go to a physician if they were having --
10 they're only going to the chiropractor -- that's the thing
11 we're trying to find.
12 MS. MOORE LEONHARDT: Perhaps we could call
13 Dr. Cassidy, and he could get to the point quickly.
14 THE WITNESS: Well I'll look for it.
15 A Okay. On page --
16 Q Look in the upper corner, left to right.
17 A It's 179. "Since it is unlikely that PCPs cause
18 stroke while caring for these patients" -- no, that's not
19 it.
20 Q That's the PCPs. That's what I referred to.
21 A I'm looking for it, where he says they would not
22 go to a chiropractor if they had a stroke. They'd go to
23 the hospital. The part that's left out is the first day
24 of someone who has had a stroke.

1 MR. PATTIS: I'm going to object. I'm
2 going to object, because I think the Board member's
3 question is fair and hasn't been answered. I'd like to
4 see that, too.
5 CHAIRMAN SCOTT: Dr. Cassidy, would you
6 like to enlighten us, please, since you are here?
7 MR. PATTIS: Well I will object to
8 interrupting this witness's testimony for that.
9 MR. MALCYNSKY: I would join in that
10 objection.
11 Q Okay. We've got multiple objections here, so I
12 guess we're getting back to the question, which is can you
13 show me where he did not include the strokes that occurred
14 at the chiropractic office? And, if you can't, we'll move
15 on.
16 A He said that -- let me just find it. I'm trying
17 to read through it. That if someone had a stroke, they
18 would not be going to the --
19 Q I already said that.
20 A -- to the chiropractor.
21 Q I said, if they already had a stroke, he said
22 they weren't included for that reason, because they have a
23 greater likelihood of another stroke. Your comment was
24 very specific about leaving out the first day.

1 A Of people already having a stroke, yes.
2 Q No. No. That's not what Dr. Cassidy said.
3 Okay, I think we can move on, because I -- okay. Next
4 question I have for you, and this is just a housekeeping
5 thing, do you have your pre-filed testimony in front of
6 you?
7 A I do.
8 Q Could you turn to the section that has over 80
9 years of literature report stroke of death?
10 A Yes.
11 Q Could you turn to where 1996 starts, which is
12 the left-hand page on the top?
13 MR. PATTIS: Can we have a page number on
14 that, please, or paragraph number?
15 DR. POWERS: It's not a paragraph number.
16 It's where he lists over 80 years of literature reports.
17 I'm sorry. It is 24, the big number 24.
18 Q Are you the one that has starts with 1996 in the
19 upper corner?
20 A I have 1996.
21 Q Okay.
22 A There's two pages.
23 Q Right. My question to you is this, and I'm only
24 going to bring up one example of this, but I went through

1 and did a lot. What it looks like is you're trying to
2 show that there was 100 and what?
3 A I'm not sure exactly.
4 Q All right, 100 and something studies.
5 A Yeah.
6 Q My question is, I'm looking down about one, two,
7 three, four, five, six down, where it says, "1996
8 Klugert."
9 A Yes.
10 Q And then I see you list the Klugert Study 20
11 times, but it's really only one study you're referring to,
12 correct?
13 A Yes. Different patients.
14 Q Okay, so, you took one study and parsed it out
15 20 times to make it look like 20 references?
16 A Individual, yes. Well I don't know 20 times,
17 but --
18 Q Well I counted them.
19 A We wanted to describe the different kinds of
20 stroke. One had blindness. One had nausea. One had loss
21 of consciousness.
22 Q Dr. Katz, I understand that. I just want to
23 understand.
24 A Yes.

1 Q It’s not 20 references?
2 A No.
3 Q There’s one reference?
4 A That’s right.
5 Q And I went through this, and I counted so many
6 of these that I was actually surprised. Now when I went
7 through most of these, I looked back on your testimony,
8 and you made the comment, and I’m just going to kind of
9 quote this.
10 You were asked extensively about peer
11 reviewed, and you made a comment, “We don’t pay much
12 attention to that.” My question to you is, first of all,
13 do you know what a peer reviewed article is?
14 A Yes.
15 Q Okay. Would you agree with the following
16 statement? “A peer review subjects the author’s work,
17 research, or ideas to the scrutiny of others, who are
18 experts in the same field.”
19 A Yeah. I’ve been a peer review officer myself by
20 journals, but the --
21 Q Okay. No. That was the question. And the
22 follow-up is, do you agree that publications that have not
23 undergone peer review are likely to be regarded with
24 suspicion by scholars or professionals in the same field?

1 A I would say yes, but the ideas are changing,
2 because there's a lot of poor quality studies. For
3 example, the Cary Study, based on one in five million,
4 based on the Chiropractic Experience of Malpractice, was
5 published in a peer review journal, the CMAJ.
6 Q I understand, but my point is this. I looked
7 through your study list here and a lot of the references
8 you made, and you're saying that you agree that most of
9 these are not from peer review journals. They're case
10 studies. They're reports. There's anecdotal
11 descriptions, etcetera, and I'm just kind of curious. How
12 do you --
13 A The journal --
14 Q Let me just finish the question.
15 A Sure.
16 Q How do you reconcile criticizing studies that
17 are peer reviewed by using limited anecdotal and basically
18 case reports? I have trouble with that.
19 MR. PATTIS: I'm going to object to the
20 form. It assumes that the case reports and anecdotal
21 information are non-peer review journals, and that's a
22 foundation that hasn't been laid, so I'm going to object
23 to that question.
24 DR. POWERS: Well I appreciate that, and

1 I'll also tell you that I'm a pretty sharp guy. I've been
2 reading peer review journals for years, and I looked
3 through his references, and I had a lot of problems
4 finding ones that I've recognized as being in peer
5 reviewed.
6 MR. PATTIS: Journal of Neurology, for
7 example?
8 DR. POWERS: I didn't say all of them.
9 A Can I mention a bunch of them to you? The Mayo
10 Clinic.
11 Q I didn't say you didn't have any. I just said
12 there's a vast body of ones that aren't.
13 A Is there a particular one you think that was not
14 peer reviewed?
15 Q Well --
16 A Give me one.
17 Q Well, first of all, there's just a ton of ones
18 that are just basically from the Mayo reports and things
19 that are definitely not.
20 A Can you give me an example, if you could?
21 Q Sure.
22 MR. MALCYNSKY: I think this is a serious
23 point, and I think, if Board member Powers -- I don't
24 quarrel with his questioning, but if he can demonstrate

1 that they haven't been peer reviewed, then he ought to do
2 so and not just make the allegations, because I think it's
3 significant to just say that, without any justification.
4 Q Well I'll start with 1973, Schmidt Tamocka.
5 A Sorry?
6 Q 1973. It just says, you know, there's a date,
7 number, naturopath. Is that a peer review journal?
8 A This is in Germany. I have no idea. No, it was
9 a naturopath. It wasn't a -- the reference is to 1973,
10 73-301-8, which is the Ishmites(phonetic), and that type
11 of designation would be the type you'd see in a peer
12 review journal.
13 Q Just because it referenced pages?
14 A Pardon?
15 Q Just because it referenced pages it's peer
16 reviewed?
17 A Well I don't know if that journal is. If you
18 have evidence that journal is not peer reviewed --
19 Q Well how about 1967, Nick J. Conamin(phonetic).
20 It says Bulletin of Memorial looks like Socialized Medical
21 Hospital in Paris.
22 A Yeah. That's a very highly respected university
23 hospital, and it's a well known publication. It's the
24 Medical Hospital of Paris Journal, and one of the letters

1 criticized in the Cassidy Study actually came from one of
2 the people at that hospital. Not that hospital, in
3 particular, but from Paris.
4 COURT REPORTER: One second.
5 DR. POWERS: I'll tell you what. I'll do
6 the research on my own for the purposes of future fact
7 finding and all, but --
8 MR. PATTIS: It can be fact finding that we
9 don't get to --
10 DR. POWERS: I just mean I'll take a look
11 at stuff, because it's hard to go through a list of these
12 that are duplicated.
13 MR. PATTIS: I object to the
14 characterization that they're duplicated. There may be
15 similar studies, or there may be reports on multiple
16 patients in the same study --
17 DR. POWERS: That doesn't make them
18 separate studies, though.
19 MR. PATTIS: They're studying separate
20 incidences, and I think that's what the doctor tried to
21 say. You're suggesting that he merely just hit the rewind
22 button and belched out a bunch of things that are all the
23 same thing. They're not.
24 DR. POWERS: Well I appreciate your point,

1 but I think it's very well known --
2 MR. PATTIS: That's all I can ask.
3 DR. POWERS: -- that when you look at any
4 article that's written and you look at the references at
5 the end, you never see someone list the same article eight
6 or 10 times and referencing different things in it, but
7 I'll move on.
8 MR. PATTIS: Unless they're looking at
9 clinically significant data. For example, I think you
10 would agree there is a difference between a female
11 patient, age 48, and a male, age 61. Would you agree?
12 DR. POWERS: Well I would, but in the
13 article, itself, they would all have the same reference.
14 It wouldn't be listed 20 times.
15 MR. PATTIS: Unless you're trying to
16 marshal evidence that in discreet cases things have
17 occurred.
18 DR. POWERS: Okay.
19 Q One other question.
20 A Yes.
21 Q You said that, in the case of medications, that
22 they're going to get the monograph when they get to the --
23 A Pharmacist.
24 Q -- pharmacy, right? And you said that the, and

1 I quote, because I wrote it down, you said, "The discharge
2 summary are the questions that follow," and the example
3 was someone calling up and saying my child has a rash.
4 A Yes.
5 Q How can it be the discharge summary of the
6 patient calling you and telling you about the rash after
7 the fact?
8 A The patient got the -- it happens all the time.
9 The patient reads the product monograph. It says one of
10 the side effects of amoxicillin could be a rash. It can
11 occur between four to seven days after the person starts
12 the medication, and, so, they see the child has a rash,
13 and they call up me and say, hey, it says here you can
14 have a rash, or I prescribe an epileptic medication, it
15 says it could have tachycardia. My child seems to say his
16 heart is beating fast.
17 Q So I don't mean to interrupt, but is the
18 discharge summary when the patient calls you, or is it the
19 monograph they received?
20 A The discharge summary is the document that is
21 received when the pharmacist dispenses it.
22 Q That's exactly --
23 A Or --
24 Q No. That's exactly what I wanted to know. I

1 wanted to know what you considered it, because I was a
2 little confused.
3 A I also counsel people on what to expect when
4 they receive a medication.
5 DR. POWERS: That's super. That's all I
6 had, just those couple of things. Thank you.
7 EXAMINATION BY DR. ROBOTHAM:
8 Q Doctor, can I ask you a question? Do you have
9 any specific methodology when you select articles before
10 coming to your conclusion?
11 A Of course I do.
12 Q Could you just --
13 A I read them carefully. I try to judge them as
14 best I can. I consult with other people, as to what they
15 might be. Of course.
16 Q That's as specific as you get? I mean is there
17 any other detail, I mean reproducible detail, when you say
18 this is going to go and this is going to stay?
19 A As a teacher, I have to do that, and I have to
20 do that with my colleagues to decide which things make
21 sense and which don't. We have to do that all the time,
22 and I am responsible for teaching residents in training,
23 so I have to do that all the time.
24 Q Okay and I'm one in character and integrity,

1 sir, and on your 20/20 presentation, you misrepresented
2 yourself as a chiropractor?
3 A No, I did not.
4 Q On a chiropractic campus, you represented
5 yourself as a guidance counselor, and I assume today you
6 sit before us as a pediatrician.
7 A Pardon?
8 Q And today you sit before us as a practicing
9 pediatrician, correct?
10 A Pediatric practitioner.
11 Q Okay. Nonetheless, it just makes it difficult
12 to digest some of the stuff that's been put out already
13 today. Going back to the 911 group that you have
14 together, you guys said you trying to help make a level
15 playing field for the chiropractors, correct?
16 A Yes.
17 Q But did you ever consider maybe consulting a
18 chiropractor?
19 A Yes, of course.
20 Q Were there any consulted?
21 A Absolutely. We've had well over 100
22 chiropractors, who adhere to the orthopractic guidelines.
23 We have Preston Long, who was going to make a submission.
24 We have Charles DeBow(phonetic). We have Michael Carson,

1 who I gave reference. I am in regular correspondence with
2 a lot of chiropractors, who have decided not to make these
3 claims, and, as a result, their use of highest neck
4 manipulation goes down 99 percent.
5 Q Okay.
6 A So, of course. I don't believe for a moment
7 that any chiropractor does not believe with sincerity in
8 what they're doing. I don't believe that for a moment. I
9 believe they are sincere. I believe that they want to
10 help people as much as any other health care professional.
11 I believe they do help people and that this
12 is not about an attack on chiropractic. It's dealing with
13 one thing. What does a patient have to know when they
14 have a neck manipulation?
15 What they have to know is not a statistical
16 analysis that they have something wrong with them, blaming
17 the patient, because the bottom line in the Cassidy Study
18 is we're blaming the patient when something is wrong with
19 them.
20 Q Okay, thank you, sir. Next, we talked about
21 passion. Could you give me some insight on why you were
22 on a group that wanted to keep Chiropractic College from
23 formulating in the Florida area?
24 A We feel that --

1 Q Who is “we?” Just you, sir. Speak for
2 yourself, sir.
3 A Ray Bellamy and Jann Bellamy, who were here, and
4 the article is written by Dr. Kinsinger and myself. We
5 believe that the 1910 Flexnor Act established that health
6 care professions should have three qualifications, and
7 having a school of chiropractic at a university would
8 mislead people, as to that this doctor degree was equal to
9 that of a medical doctor degree, or a nursing doctor
10 degree, or any other one, so we did not want to mislead
11 people, because the last conversation Laurie Jean
12 Mathiason had with her mother was I, and it was testified
13 here, I want to go back to see the chiropractor, and she
14 said don’t go, and she said -- a doctor.
15 So, in fact, there is no chiropractic
16 school. It’s not just Florida or York. It’s all over the
17 place. There’s no chiropractic school, which has been
18 recognized as being affiliated with any medical school
19 according to the 1910 Flexnor Act or involves -- it would
20 be misleading to these people, and, eventually, they
21 abandon the effort.
22 Q Okay and, finally, you said that chiropractors
23 in adjusting the cervical upper neck go beyond the normal
24 range of motion. Where do you find the literature on the

1 fact, the science based on that information?
2 A The terminology the chiropractors use I think is
3 within the physiological range, and do you know exactly
4 how they word it? My mind is lost right now, but there is
5 -- when you define as a chiropractor, you say it goes
6 beyond the anatomical or physiological range of whatever?
7 Q I'm asking you. I want to see where you got
8 your information.
9 A Well I'm trying to remember, but I've been here
10 for three hours. And if you have questions about my
11 character and these misrepresentations, it's unfortunate
12 the affidavit is not here, because the chiropractors
13 withdrew all of those characterizations of me
14 misrepresenting myself, but we don't have the affidavit
15 public. This was written by Steven Pearl.
16 MS. MOORE LEONHARDT: I'd just like to
17 object. The witness is under oath and under Cross-
18 Examination, and I would note, because it's not noted in
19 the transcript, that one of the prior witnesses, who is a
20 party to the proceeding, just approached the witness and
21 coached the witness and handed the witness a document,
22 which is improper.
23 MR. MALCYNSKY: I would acknowledge I
24 observed the same thing, but she gave him a document,

1 which would help him answer Board Member Robotham's
2 question about where he gets the reference to the range of
3 motion.
4 THE WITNESS: And I've seen this before.
5 MS. MOORE LEONHARDT: I think I've made my
6 point. It's improper to coach the witness. He was being
7 coached by a party improperly.
8 MR. MALCYNSKY: He's not being coached by
9 the --
10 MR. SHAPIRO: Excuse me. Excuse me.
11 DR. ROBOTHAM: We're all set. I'm all set.
12 Thank you, sir.
13 MR. MALCYNSKY: Excuse me. Board Member
14 Robotham, you're not interested in an answer to your
15 question?
16 DR. ROBOTHAM: The record speaks for
17 itself.
18 THE WITNESS: The greatest therapeutic
19 effect is believed to come from manipulation beyond this
20 passive range, hence, paraphysiological. Manipulation in
21 the paraphysiological range of motion is thought to
22 improve joint function, decrease pain and mobility and
23 promote better health, so that's what it is, beyond
24 passive motion.

1 In other words, beyond you turning your
2 head and picking up a pad at Walmart. And, again, I would
3 just like to say one thing. If you ask people if they had
4 muscular strain or strain at Walmart and sent the study
5 into Cassidy, you'd get exactly the same statistics than
6 if they saw a doctor.
7 It has nothing to do with going to a
8 doctor, because nothing happened at the doctor's office,
9 and the variables, which people came to the doctor's
10 office to complain about, everyone here who likes the New
11 England Patriots would complain about the same variables
12 when they lose a game. I've got a tension headache. So
13 send those in.
14 Statistical studies with the two most
15 important variables meaning nothing.
16 DR. POWERS: I think you've more than
17 answered the physiological question, but thanks.
18 THE WITNESS: You're welcome.
19 MR. SHAPIRO: Any other questions?
20 MR. PACILEO: Yes, just a couple questions,
21 please.
22 EXAMINATION BY MR. PACILEO:
23 Q Just a couple questions on the Cassidy Study.
24 A Yes, sir.

1 Q One of the key points in the Cassidy Study at
2 the conclusion says there is also an association between
3 vertebrobasilar artery stroke and the use of primary care
4 physician visits in all age groups. Do you agree with
5 that statement or disagree with that statement?
6 A No. If you want to compare the two statistical
7 groups, compare risk, compare the same neck manipulation
8 being done in a chiropractor's office to the same neck
9 manipulation being done by a doctor, but that other
10 variable is not there. It's not there. They didn't have
11 a neck manipulation.
12 How can you compare? You're saying that
13 strokes from a neck manipulation occurring within 30
14 minutes in 75 percent of the cases are the same as the
15 person going up to a month later and being hit by a car,
16 or golfing, or picking up a pad at Walmart.
17 There's two different variables, and that's
18 why it is acknowledged in the paper that the differential
19 variables don't exist. They don't make any sense. So how
20 can you compare those two variables? You can't. It's
21 completely false.
22 Q Okay, so, I'll interpret that as a no.
23 A Yes.
24 Q Okay, thank you. The article, itself, is peer

1 reviewed, and I was just curious, as to whether you
2 submitted anything on your behalf questioning what you've
3 just, for example, suggested to me with regard --
4 A Sure. Indirectly, Dr. Mang(phonetic), who is a
5 professional colleague I know in France, actually
6 corresponded with me about the article, and he was the one
7 who wrote the critique of the article, and he's actually
8 working with us on another article, which shows that the
9 motion of neck manipulation caused subdural bleeds, which
10 people on anticoagulants, who have neck manipulation, can
11 have subdural bleeds, and we're using the hematocrit
12 effect to date those things.
13 So Dr. Mang, myself, Dr. Stewart, Dr.
14 Norris, a whole bunch of people, are working on that study
15 to show this is a previously undescribed risk of neck
16 manipulation, so Dr. Mang wrote the critique.
17 In response to the critique, Dr. Cassidy
18 wrote his letter.
19 Q So just so I interpret your answer, you did not
20 write one yourself, but you were a contributor to someone
21 else's response.
22 A That's right. From France.
23 Q In looking at your submitted testimony, I
24 couldn't help but notice on the first page you used the

1 word "quackery."
2 A Yes.
3 Q And you mentioned, in terms of "This quackery is
4 taught today in every school of chiropractic."
5 A Yes.
6 Q Now would it be fair to me to interpret that if
7 something is taught in a school that is quackery, are
8 those that are participating in that class quacks?
9 A I think the term "quackery" is not appropriate,
10 and I apologize for that, because I think that it implies
11 that the person is purposely misleading, so we are getting
12 away from the word "quackery" completely, and we're
13 replacing it when we're not feeling as passionate with the
14 term "non-scientific."
15 So the basis for saying it's taught in
16 every school was actually a survey done by the
17 chiropractors, which was published, as to what is taught
18 in each chiropractic school, and all 13 of them said we
19 teach subluxation philosophy, and that is in regard to
20 this book, which is in my pre-filed testimony, that over
21 200 conditions, from cancer, to diabetes, to colic, that
22 they claim, and there's a course at Bridgeport in
23 pediatrics, and Pearl in his testimony says what we teach
24 is, you know, scientific, well why do you sell this

1 textbook, why do you have a course in pediatrics, so I
2 apologize for the term "quackery."
3 I think it's wrong, and I think it's a
4 mischaracterization of people. What I would love to see,
5 which the medical profession has tried to do, but not hard
6 enough to do, is to set up a course with neurologists and
7 chiropractors to go over the basic anatomy with
8 pathologists to go over.
9 It was tried in Michigan for awhile, but a
10 number of chiropractors attended these courses, but I
11 think it would be very important that at some point the
12 medical profession extends itself to offer a mini-med
13 course on the anatomy and the risk. I would love to see
14 that, in terms of cooperation.
15 Q And just my last question to kind of build on
16 one of the questions that one of the other Board members
17 asked. I guess there was some sort of -- the word used
18 was "misrepresentation," I believe.
19 A Yes.
20 Q And I was just thinking that if I exchanged
21 chairs with one my other Board colleagues, males, and did
22 not change the name placards and presented myself as a
23 chiropractor, as opposed to a Public Member, that wouldn't
24 be fair to you, correct?

1 A Yes, and when we presented the affidavit about
2 all the misrepresentations, the chiropractor lawyer
3 ordered it sealed. It's in my affidavit. He said we have
4 no evidence. He said we have no evidence at all. The
5 Naiberg letter stolen from my office, unsigned. It goes
6 on and on.
7 Q Sure. Would you then agree, then, that even the
8 appearance of misrepresentation hurts someone's
9 credibility, not just as an expert, but as an individual?
10 A It's total misrepresentation, acknowledged by
11 the chiropractors, throwing out the evidence and saying
12 there's no evidence in a sworn affidavit.
13 MR. PACILEO: Thank you, Doctor. I
14 appreciate your patience.
15 THE WITNESS: You're welcome.
16
17 EXAMINATION BY DR. IMOSSI:
18 Q Okay, Dr. Katz. A few more questions. I'm
19 confused about the Rothwell Study that you seem to support
20 and you cited in your list of the case studies, and now
21 that the Cassidy Study disagree with. I don't understand.
22 A I don't disagree with the Rothwell Study.
23 Q You agree with the Rothwell Study, is what I
24 said.

1 A That there was an increased risk, yes.
2 Q I don't understand why you don't agree with the
3 Cassidy Study. The way I see it, it's just a larger
4 study, and it also includes another set of physicians.
5 A Well Cassidy, if he brought along the letter,
6 said that he, you know, it was a different study. It did
7 not really expand necessarily on the Rothwell Study, as
8 far as I remember. I might be wrong.
9 But I think that the statistical study is
10 trying to blame the patient, because that's what we're
11 talking about really, that it's equal if you have a car
12 accident stroke as opposed to a neck manipulation. You're
13 comparing two apples and oranges, which have nothing to do
14 with each other.
15 The variables that he chose, neck strain,
16 rheumatism and so on, there's no evidence, whatsoever,
17 that these are strokes about to happen, and he excluded
18 pain.
19 Well the chiropractors here said these
20 dissections are painless, as if the vertebral artery
21 suddenly doesn't have nerves, so why didn't he include
22 painless as a code, all the variables, and then all the
23 subsequent coding, relying on abstractors to pick out
24 vertebral artery dissection and leave out, again, I cannot

1 emphasize this enough, the 28 percent that are carotid
2 dissections?
3 He left out that whole population group.
4 What does that do to his statistics, if you leave out 28
5 percent of people, who had strokes and don't have any
6 vertebrobasilar artery?
7 And what about if doctors decided to code
8 locked-in syndrome, Horner's Syndrome, Brown-Sequard
9 Syndrome? Brown-Sequard Syndrome as no vertebrobasilar
10 artery disease. Sorry. Go ahead.
11 Q All right. In the Cassidy Study, do you have
12 any explanation to why there might have been the same
13 increased risk of stroke after seeing the primary care
14 doctor as seeing the chiropractic physician?
15 A Well because the other people went out and
16 played golf, or had a reason for their stroke, and it
17 could be a month later, while the chiropractic strokes,
18 and we should go back to that little issue, about the zero
19 day, but those were -- you know, Cassidy said he was not
20 aware of any previously reported study about what happened
21 the first day.
22 Holderman reported it six years before him
23 in Spine, in the same publication that he published in,
24 and it showed 75 percent of strokes were happening within

1 30 minutes.

2 Somewhere, that statistic is not in here,
3 for whatever reason, whether it's the first day, the
4 second day, or he coded it, or he didn't code it. It's
5 not in there. So whatever is wrong with the patient, the
6 basic fault is that something happened. They jaywalked,
7 which is a defect, but they got hit by a car.

8 Without being hit by a car, a direct cause,
9 a direct case study, I got hit by a car, I have my neck
10 manipulated, and 30 minutes later. Sandy Nette, she
11 started throwing up. The people you heard here did the
12 same.

13 Q All right, so, you don't feel that there was a
14 prodrome going on in both sets of patients that was missed
15 by both sets of doctors?

16 A Well let's say there was a prodrome going on.
17 What, then, caused the prodrome? Laurie Jean Mathiason
18 had a large left vertebral artery. Is that a prodrome?
19 She would have lived until she was a grandmother. It was
20 the neck manipulation, the second cause.

21 As Jann Bellamy said, the ultimate message
22 from the Cassidy Study is you don't know if someone is
23 having a stroke, so you'd better be sure. You shouldn't
24 manipulate the neck unless you have to.

1 Q All right. Let's move on to another topic.
2 Most of these case studies that you presented, or a large
3 portion of them, are done outside the country, which I
4 have a few concerns about, and you said you carefully
5 reviewed these studies. Do you have any idea if the
6 manipulation performed in these other parts of the world
7 is similar to the chiropractic adjustments performed in
8 the U.S.?
9 A All of the case studies I refer to were done in
10 Canada and the United States. The Canadian Journal of
11 Neurological Science was the one I --
12 Q I'm sorry. I'm talking about the 80 years of
13 literature reports on stroke and death.
14 A Oh, that. Well they were done at the Mayo
15 Clinic. They were done at Montreal hospitals. They were
16 done all over the place, in Canada and the United States.
17 They were published in JAMA, the Journal of the American
18 Medical Association.
19 Q Right, but many of these actual incidents
20 happened all over the world.
21 A Yes.
22 Q It's hard to say exactly what kind of procedures
23 were done.
24 A There's a new study from China that just came

1 out, yes, which shows we have the same vertebral artery,
2 whether we're Chinese or Canadian. The vertebral artery
3 doesn't change.
4 Q It also appears the words "chiropractic" and
5 "chiropractor" were used synonymously with spinal
6 manipulation.
7 A That's true. We had a death in the three-month-
8 old caused by a naturopath, due to neck manipulation.
9 Q But doesn't that -- I mean, if these are on the
10 same scale and produced in peer review journals, why would
11 a peer reviewer, if the biomedical research standards out
12 of the country are the same as they are here in North
13 America, why would a peer reviewer allow these mistakes to
14 go through? I mean I could give you the two examples.
15 A Sure.
16 Q They were pretty dramatic. 1990?
17 A In my submission?
18 Q Yes. The case studies that you have. You have
19 three of the cites there. The study, itself, I dug up the
20 original study, and it had four case studies, and the
21 people that performed them were there was a chiropractor,
22 a physical therapist and a high school athletic trainer,
23 but they're listed all here as chiropractors.
24 A Let me tell you where this list came from. This

1 list was compiled by a chiropractor named Teret(phonetic),
2 so 75 percent of the things listed here are word-for-word
3 from a chiropractor named Teret, and I have the book here,
4 which I can show you if you'd like to see it, and we can
5 file it.
6 And if you go down the list, it was filed
7 by a chiropractor, talking about the risk of neck
8 manipulation stroke. I believe I have the book right here
9 if you want to see it. So this was compiled I'd say 70
10 percent by a chiropractor.
11 Q But you adopted it as your testimony. I would
12 have hoped you would have made sure that it was accurate,
13 because there's another even more dramatic example, 2006,
14 Journal of Neurology, Ruda(phonetic) is the author, and
15 there are 36 of these cases of vertebral artery
16 dissections after chiropractic neck manipulation in
17 Germany over three years.
18 Again, they say the word "chiropractic
19 manipulation." Only four out of 36 were chiropractors.
20 Half of those were orthopedic surgeons.
21 A Yes. I acknowledge that. I'm not denying. I
22 think we all have the same vertebral arteries. We all
23 have the same carotid arteries. We all have the same
24 weakness at the level of the dura, which can be torn by a

1 rotation. We all have the same epidural arteries, which
2 can be shook and cause subdural hemorrhages, so whether
3 it's a chiropractor, a naturopath.
4 What I would like, because I think
5 chiropractic is the one profession which is well
6 controlled and reasonably well regulated, and if
7 chiropractic would adopt this procedure monograph on the
8 same level playing field as physicians are required to do
9 when they prescribe the medication -- I'm not going to
10 waste time trying to convince naturopaths to stop it.
11 I'm not going to waste my time trying to
12 convince healers, but if chiropractors would say I'm only
13 doing neck manipulation in the highest neck area for
14 proven clinical benefit, that is a group that we can work
15 with and this Board can work with.
16 Q All right. One further question. That Saeed
17 Study that you had mentioned, I'm just using from what you
18 had just said, you said that patients presented with
19 warning signs.
20 A Yes.
21 Q And then they were adjusted, and they had a
22 stroke.
23 A Yes.
24 Q Now, at that point, what would you conclude was

1 the reason they had warning signs? What was going on
2 before this neck manipulation?
3 A If you wanted to identify codes, that people are
4 about to have a stroke, you would not include muscular
5 rheumatism, which you see in gout and Lupus, or whatever,
6 fibromyalgia, or neck strain. You would code, as they
7 said, sporting activity or the most common, 15 and 11
8 percent respectively --
9 Q That wasn't the question.
10 A Sorry?
11 Q Just the question. So do you have any
12 explanation for those warning signs, the stroke warning
13 signs?
14 A Well the warning signs, yes.
15 Q What was the reason they were there even before
16 the neck manipulation, unless there was something already
17 going on in the person's neck?
18 A Well vertigo. Unilateral facial -- these are
19 warning signs that occurred after playing golf, or after
20 the neck manipulation.
21 Q So you don't think --
22 A That's where the discharge summary --
23 Q There wasn't anything physiologically going on
24 with the patient, then? The warning signs were just

1 occurring?
2 A There is absolutely no evidence that people
3 going to a chiropractor, who have a tension headache, have
4 a dissection in progress, that people going to a
5 chiropractor with muscular rheumatism have a dissection in
6 progress, that people with neck strain have a dissection
7 in process, or people with no neck pain at all have a
8 dissection in process.
9 And what you should do, if you believe that
10 tension headaches are more of a risk, you should code and
11 say, hey, of all the warning signs, this was the most
12 significant one, but that was not done.
13 Q Well symptoms usually don't have a diagnostic
14 code. I think that's the problem.
15 A For what? For no neck pain? But we heard from
16 Lauretti that no neck pain was a risk factor for having a
17 stroke, so why not code it?
18 Q I don't think he said it was no risk factor.
19 DR. IMOSSI: All right. I'm done with my
20 questions. Thank you.
21 THE WITNESS: Okay. Thank you.
22 MR. SHAPIRO: We all set?
23 CHAIRMAN SCOTT: At this time, the Board
24 would like to call Dr. Cassidy back up, very briefly, to

1 ask him two, maybe three questions.
2 MS. MOORE LEONHARDT: May I just ask Dr.
3 Katz one last question? I won't pursue. It won't open up
4 a can of worms. It's a simple question.
5 MR. SHAPIRO: Okay. Ask your question,
6 counsel.
7 MS. MOORE LEONHARDT: Thank you.
8 BY MS. MOORE LEONHARDT:
9 Q Dr. Katz, isn't it true that Laurie Jean
10 Mathiason was self-adjusting, in addition to being
11 adjusted by her chiropractor?
12 A That was a claim that they made, and there is
13 some evidence of that, in that her boyfriend also went to
14 a chiropractor and was trying to help her to show her what
15 to do, but the time sequence when the coroner concluded,
16 as to the cause of death, was that three days before she
17 went and had a neck manipulation, and she started having
18 symptoms.
19 She went back the next day with more
20 symptoms. She was ataxic. She had trouble walking to the
21 table. We dated her dissections afterwards to show they
22 did not occur when she had her own adjusting. They
23 occurred three days before, using, again, the factor eight
24 dating.

1 You can date these strokes, as to when they
2 were happening, so the coroner concluded exclusively,
3 which is in my pre-filed testimony, I can find the
4 paragraph, that the cause of death took place and started
5 within that three-day period of the neck manipulation and
6 not a month before, or two months before, so that's in the
7 pre-filed testimony.
8 MS. MOORE LEONHARDT: Thank you.
9 MR. SHAPIRO: Thank you, Dr. Katz.
10 THE WITNESS: Thank you.
11 CHAIRMAN SCOTT: Dr. Cassidy, would you
12 please come forward? Thank you very much, Dr. Cassidy.
13 I'm going to remind you that you're still under oath, and
14 Dr. Powers is going to ask you one or two questions.
15
16 DR. DAVID CASSIDY
17 having been recalled as a witness, having been previously
18 sworn, testified further on his oath as follows:
19
20 EXAMINATION BY DR. POWERS:
21 Q Can you just clear up this zero to one day
22 question that we've discussed?
23 A The zero to one day exposure window was used for
24 the chiropractors. It was not used for the physicians,

1 because the zero to one day period someone could have gone
2 to see the family physician having a stroke and then been
3 sent to the hospital.
4 Q But the chiropractor's group did include if they
5 had a manipulation at the chiropractic office?
6 A On the same day, yeah.
7 Q Okay, because I think that's what Dr. Katz was
8 explaining.
9 A I think he had it mixed around, actually.
10 DR. POWERS: Okay. That's the only point I
11 needed clarification on.
12 MR. SHAPIRO: Okay. Thank you, Dr.
13 Cassidy.
14 CHAIRMAN SCOTT: Thank you very much. Have
15 a safe flight home.
16 THE WITNESS: Thank you.
17 CHAIRMAN SCOTT: We are going to close now
18 for today, and the Board is going to remain to discuss
19 what will happen in the next coming days.
20 (Whereupon, the hearing adjourned at 5:20
21 p.m.)

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